The Journal
OF THE KANSAS MEDICAL SOCIETY

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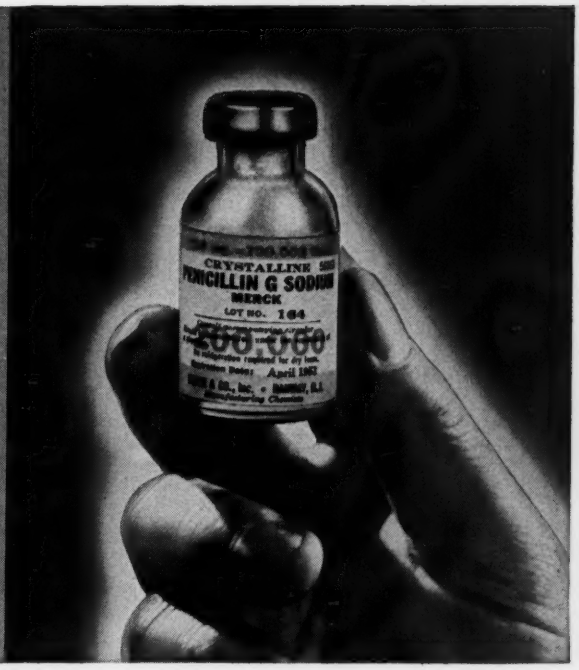

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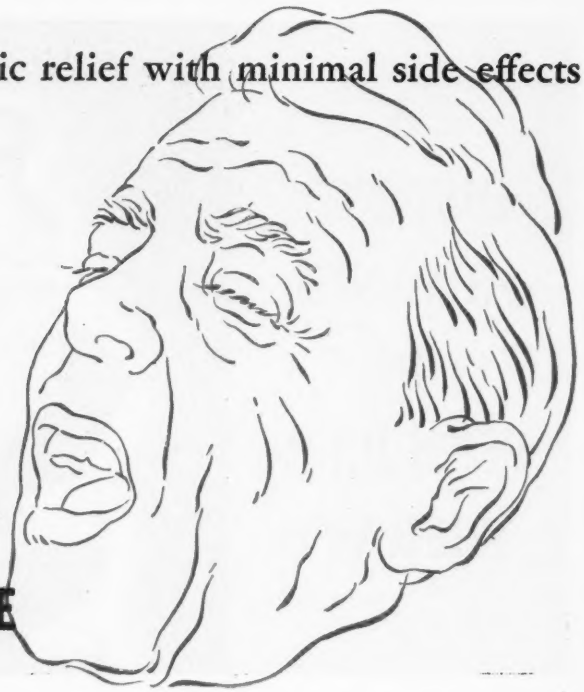

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1. Arbesman, C. E.: *N. Y. State Jl. of Med.*, 47: 1775, 1947.
2. Loveless, M. H.: *Am. Jl. of Med.*, 3: 296, 1947.
3. Bernstein, Rose and Feinberg: *Ill. Med. Jl.*, 92: 2, 1947.
4. Osborne, Jordon and Rausch: *Arch. of Derm. & Syph.*, 55: 318, 1947.

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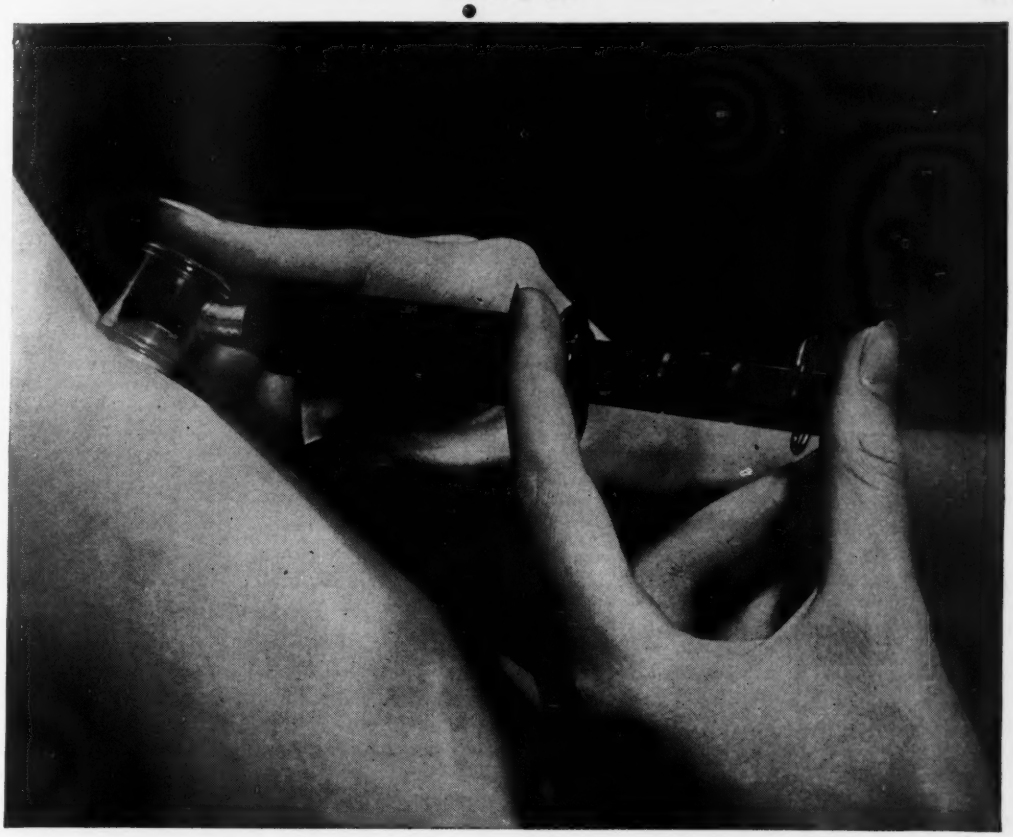

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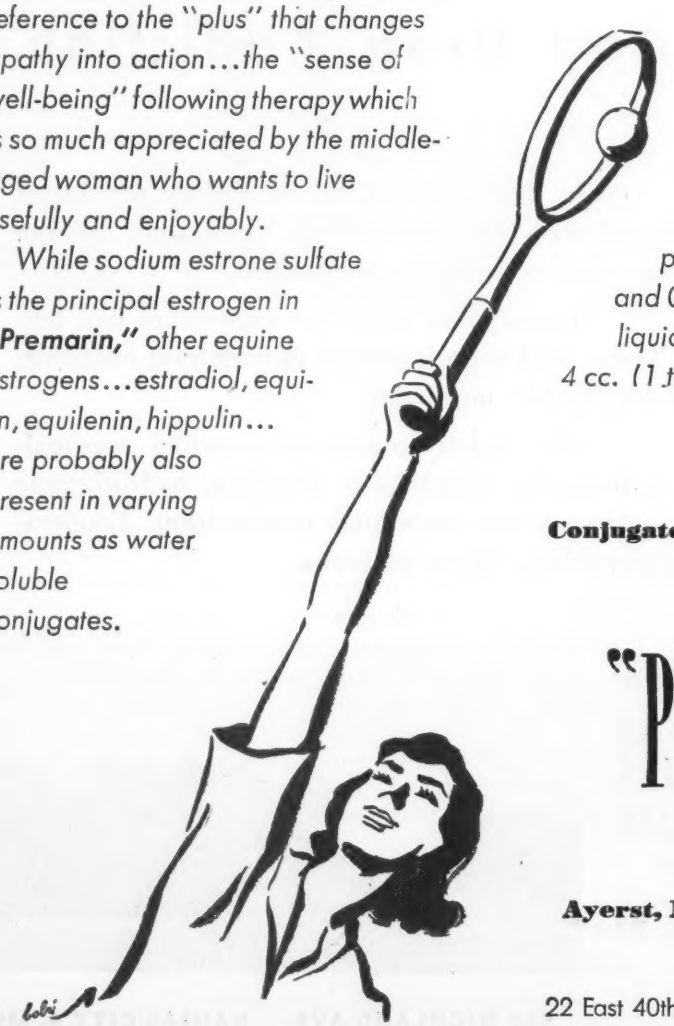

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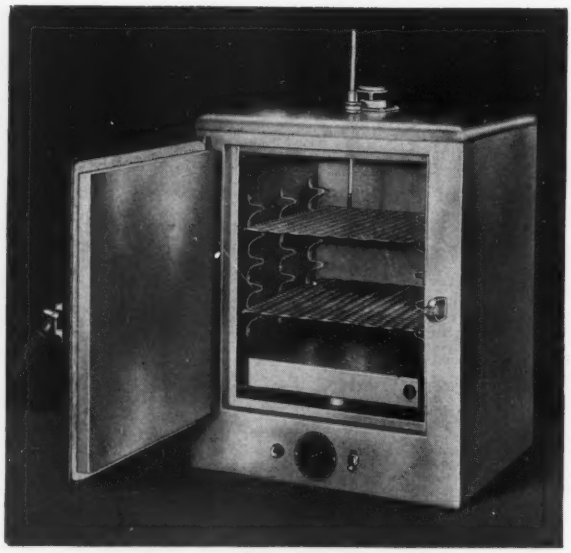
1. Feinberg, S. M., Bernstein, T. B. (1947), Histamine Antagonists, VIII. N-(a-Pyridyl)-N-(a-Thienyl)-N', N'-Dimethylethylenediamine, a New Antihistaminic Compound. Experimental and Clinical Experiences, J. Lab. & Clin. Med., 32:1370, November. 2. Feinberg, S. M. (1947), The Antihistaminic Drugs, Amer. J. Med., 3:560, November.



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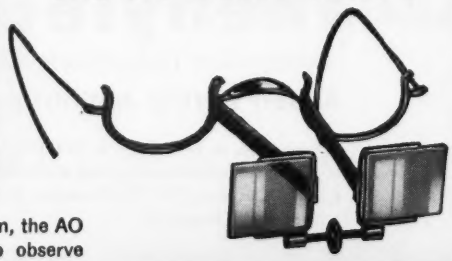

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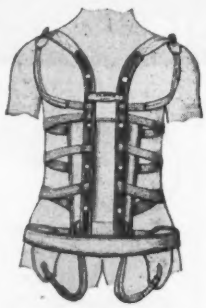

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MODERN SURGERY OF RETINAL DETACHMENT*

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ETIOLOGY

The etiology of idiopathic detachment of the retina is in many cases confused, because the predisposing factors are combined. In the first place, there are two outstanding factors that favor the production of retinal detachment—myopia and trauma. Less marked predisposing factors are chorioretinitis of low degree, and senile degeneration of the retina. These four factors are the most important, and either isolated or associated with each other, play a part in almost all cases of retinal detachment.

Slides of an eye recently examined histologically by Vogt, in which the retinal detachment was only several weeks old reveal the fact that in fresh detachments there is no evidence of any inflammatory changes as postulated by Leber-Nordenson-Gonin. There are no evidences of any inflammatory hemorrhages or blood-clots, nor of any scar formation, nor of any strand formation, nor of any inflammation whatever as a cause of spontaneous retinal detachment.

Finally, other predisposing conditions in this disease include hepatorenal insufficiency, dyscrasias, psychic disorders, and ocular fatigue. The causes which may produce symptomatic detachment are tumors, cysticercus, albuminuric retinitis, orbital cellulitis, scleritis, etc.

Recurrences after successful retinal detachment operations are very frequent. The correct percentage is not known at present. Kleiner, Larsson, Vogt, Weve, and others have written about this. Gonin differentiates between recurrences which occur two to three weeks after surgical interference, and those which occur later. In the first cases, he believes that the original tear is not properly closed or sealed, or another tear has been missed or overlooked, or a tear may be present in an area which the ophthalmoscope cannot observe. In most of these recurrent cases, the cause probably lies in the great fragility of the retina, which tears in a new place as soon as the original tear is sealed down. The fragility of the retina is a very important factor. The operation then becomes a symptomatic treatment. One must not overstep the limitations offered by each individual case, otherwise surgery will be miscredited.

We close or seal through operations the end result of the causative factor or process of the retinal detachment, which rarefies or thins the retina and by this means can also lead to formation of tears, through which the vitreous enters behind the retina and results in detachment of the retina in a large proportion of the cases. There is, therefore, no reason why a case that has healed successfully after operation, should not develop a new hole or holes in the immediate vicinity of the healed area, where the retina has become pathologically thin or fragile, with a resultant recurrence of the retinal detachment. Following a recurrence, the surgeon should persuade the patient to have a second or third operation, as the rarefied or fragile retina is usually limited in extent and may be successfully sealed or closed up. If the second eye is functioning properly, it may be more difficult to persuade the patient to have further work done. If the second operation is unsuccessful, or a recurrence develops, it becomes even more difficult to secure the patient's consent for a third or even fourth surgical procedure.

The various types of detachment of the retina may be divided into the following groups:

Group 1: Idiopathic or simple detachments and those caused by direct trauma to the eye. These are all considered operable.

Group 2: Detachments due to strands in the vitreous which pull the normal retina from its base. These result from violent intraocular hemorrhages, perforating injuries, or massive vitreous hemorrhages. Occasionally they may be operated by special procedures.

Group 3: Detachments resulting from intraret-

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inal hemorrhages. These are rare, and may heal spontaneously.

Group 4: Detachments due to formation of so-called "pathological" subretinal fluid. These may occur in severe nephritis and toxemias of pregnancy. Surgical interference is contra-indicated, as healing may occur if the underlying systemic condition is cured.

Group 5: Detachments caused by neoplasms such as sarcoma of the choroid. Enucleation is indicated in such cases.

It can, therefore, be readily seen that our surgery is usually confined to cases of the first group. In the light of our present knowledge, such detachments are caused by the presence of one or more tears in the retina. This principle is well accepted.

In these cases, the retinal detachment tends to spread, due to normal rotation of the eyes. Therefore, as soon as a retinal detachment is discovered, the eyes should be put at rest, either by pin-hole spectacles or a binocular bandage. This helps to prevent further spread of the detachment.

In order to cure a retinal detachment, the hole or tear must be walled off from the rest of the fundus by a solid line of watertight choroidoretinal adhesions. The tear or hole is closed by causing this area of the retina to be incorporated in a choroidoretinal scar, the result of an artificially produced exudative choroiditis.

OPERATIVE METHODS FOR DETACHMENT OF THE RETINA

Gonin Thermopuncture Method. One, of course, must begin with Gonin's thermopuncture method which he so ably elaborated upon about twenty years ago. Gonin chose this method because of the simplicity of instrumentation. This method has many advantages, especially when it is possible to reach the tears without much difficulty and when they are of such a nature that they can be sealed with one thermopuncture. The scar, about four to five mm. in width, is a firm scar which glues down the retina, choroid, and sclera with one strong scar. The actual area cauterized does not spread, and for this reason is definitely superior to the Guist and Lindner chemical cauterization method, or even the diathermy current used by Larsson, Weve, and Safar.

The Operation. The location of the retinal tear having been accurately ascertained by one of several methods, and sketches made of the fundus picture, the eye is irrigated with oxycyanide of mercury, 1-10,000 solution, and anesthetized by the instillation of cocaine HCl, four per cent solution, or pontocaine one-half per cent solution, m j, at three minute intervals for four instillations. A retrobulbar or subconjunctival injection of novocain solution, two per cent, 1-1.5 cc. is made, and one to two drops of adrenalin solution 1-1,000 instilled to control bleeding. If pontocaine is used instead of cocaine, the cornea will remain clearer and ophthalmoscopic examination control becomes much easier. The conjunctiva over the area involved is incised parallel to and 10-12 mm. distant from the limbus and the conjunctival edges retracted with silk traction sutures or suitable retractors. The exact area in the sclera overlying the tear is carefully ascertained, usually with the aid of an Amsler or Macky Marker. The sclera is incised with a fine Graefe knife for a distance of 1-2 mm. in length. If much fluid is present, the knife is rotated to allow escape of same; if little fluid is present, only a small incision is made and the knife is not rotated. The cautery, which has been previously heated to a white incandescence, is now plunged through the incision to the depth of three or four mm. in such a way as to touch the retina. It is left in for only one or two seconds, never more. The conjunctiva is sutured with a single running loose suture, atropine sulphate Ung, one per cent, instilled and both eyes bandaged. The head of the patient is placed in such a position that the vitreous presses against the puncture hole.

The Galvanocautery Method. This method has been extensively used in place of the thermocautery. Fine electrodes, slightly bent at the end are used. Electrodes made with sharp points may be used to more easily pierce the sclera. Several punctures may be made before the eyeball softens, the sclera being perforated to a depth of two-three mm., the cautery point being kept in about three-four seconds. One drawback is the important fact that the heat varies.

The Lindner-Guist Chemical Cauterization Method. Both Lindner and Guist decided upon the use of potassium hydroxide after many poor results following the early successes with thermo galvanocautery methods.

After subconjunctival or retrobulbar anesthesia injections, the site of the tear is marked on the bare sclera, the area is surrounded with a series of scleral trephinings, using either a 1.5 or 1.75 mm. trephine. The trephining is done very gradually in layers. Not every trephine opening is touched with the caustic. The caustic is immediately neutralized with one-half per cent acetic acid. Lastly, the choroid is perforated with a sharp canaliculus dilator.

The complications consist of piercing the choroid and allowing subretinal fluid to escape, and hemorrhage from an injured vortex vein or choroid.

However, large surfaces can be cauterized, especially necessary when treating large disinsertions. The main disadvantages consist of the requirement of an exact technic of the trephining, the consummation of much time, and hemorrhage from the choroidal vessels.

Linder used a so-called undermining technic for holes in the macula. The idea is an excellent one, but the technic necessary is much involved.

DIATHERMY OR ELECTROCOAGULATION

This consists of two methods, viz:—

1. Surface coagulation with blunt electrodes.
2. Electropunctures producing coagulation in the choroid.

Surface coagulation was given impetus by the reports from Larsson's Clinic in Stockholm. He aimed at coagulating a large portion of the choroid, which produced an extensive retino-choroiditis with resultant closing of the tear. While an accurate localization of the tear is not so necessary with this method, Weve insisted that the electro-coagulations be placed directly over the region of the tear. A ball electrode, two mm. in diameter is held lightly against the sclera for three seconds, the applications being kept at a distance of two-three mm. apart. A trephine opening or two is made in the coagulated area, the choroid perforated with a sharp scissors point, and the subretinal fluid is allowed to escape. The complications are few, except for a definite lowering of the tension.

The strength of current used is 30-40 m.a. Weve used a three-four mm. electrode with a 100-150 m.a. as a rule, the time being two-three seconds for each application.

Weve Technic. Weve later changed from surface coagulation to the electropuncture method. Weve uses fine needles 0.2 mm. thick and ranging from 0.75 to 1.5 mm. in length. "Brushes" containing four-five such needles may also be used. The current used is 30 m.a. Longer needles three mm. in length may first be used to assist in locating the tear. These punctures result in a white spot on the retina, about ⅓ D.D. in diameter, and are observed ophthalmoscopically. Then follows either the surface coagulation, the multiple puncture method or a combination of both. A white, flat scar results in the region of the tear. The scar is similar in appearance to the thermo-puncture method of Gonin. It obliterates the tear and seals the retina down, and does not usually cause the formation of retinal folds and subsequently secondary tears.

The micropuncture method is now universally practiced all over the world. The coagulation points have been varied by different operators, such as the Safar pins, Walker pins, Gradle electrode, Pischel pins, etc. The essential end result is practically the same. The Walker pins require a moderately involved technic, while the Gradle electrode is much simpler to use.

THE ELECTROLYTIC METHOD OF TREATMENT OF DETACHMENT OF THE RETINA

Catholysis. Electrolysis was first attempted in the surgical treatment of retinal detachment towards the end of the 19th century. It has recently been revived by Vogt and Imre, who have termed it catholysis. The main difference between this therapeutic procedure in those days and now is the importance of the accurate localization of retinal tears with the object of closing them through a barrage of choroidoretinal lesions induced asceptically by chemical caustics or through the medium of such physical agents as heat and electricity.

The therapeutic principle of catholysis is to effect reaction through the liberation of sodium and hydroxyl ions at the point of the negative terminal which is inserted through the sclera into the choroid.

The technic is similar to that described for diathermy. The negative electrode consists of platinum-iridium needles one, 1.5 or two mm. in length, depending upon what part of the eyeball they are to be used. The positive electrode is attached either to an Arruga retractor or to the patient's limb. Bubbles of hydrogen gas are liberated at the tip of the needle in the choroid. The current may vary from 1.75 m.a. to three m.a., and is held in contact for three-four seconds.

The first puncture in the sclera is made as near as possible two mm. behind the site where the retinal tear is judged to be and the fundus is examined immediately after this. Bubbles of hydrogen gas are seen at the point of perforation of the electrode and these serve for intraocular localization of the relation of the puncture to the retinal tear. The needle is inserted at intervals of 0.5 mm. over this area as the scars produced by this method of treatment are small and do not appear to be more than 0.5 or 0.75 mm. in diameter on ophthalmoscopic examination. Where the retina is shallow and at the macular and posterior pole of the eye, a grayish-white, fluffy edged cloud is readily seen at the point of the needle in addition to the bubbles. Surface coagulation with diathermy may be made to surround this area. The sclera is trephined as usual over this area or over the area where the fluid is most dependent. The choroid is punctured with a punctum dilator and the subretinal fluid is evacuated.

In favor of catholysis is the precision with which its effect on ocular tissues is circumscribed. There is no extensive spread of the current and on this account no damage is inflicted on other intraocular structures remote from the area of operation. After catholysis there are usually not seen any complications such as cyclitis, iritis, cataract, and optic neuritis, which follow in some cases in retinal detachment treated by any one of the surgical diathermy procedures.

In the author's opinion, the best type of operation for retinal detachment at present is one which combines partially penetrating coagulation with perfo-

rating diathermy and incorporates frequent inspections of the fundus during the operation. The operation is usually done by placing perforating pins such as Walker's or Pischel's pins directly over the area of the tear and making frequent inspections with a direct or indirect ophthalmoscope in a darkened operating room. If the grayish areas produced by the diathermy current are seen to be located in the area of the tear, several more pins are inserted in the same region. This area is then barraged with partial penetrating electrocoagulation pins such as Kronfeld's, Meyer's or Gradle's. Flat diathermy coagulation may be applied around the area of the tear in lieu of the partial penetrating pins. Repeated fundus examinations are made to observe the thoroughness of the coagulations. This necessitates frequent instillations of saline solution on the cornea. After the penetrating pins are removed at the end of the operation, sufficient drainage of subretinal fluid should occur to allow the retina to fall back onto the choroid. If this does not occur, then a larger 0.5-1 mm. perforating electrode is inserted in a dependent portion of the eye to allow for better drainage. If the eye has not become too soft, a trephine opening through the sclera may be made and the choroid perforated with a blunt pointed canaliculus probe. With this combined method performed under direct observation, a much larger percentage of cures can be obtained.

In cases where a shrinking of the retina has occurred due to agglutination of a fold or folds, vitreous hemorrhages resulting in a retinitis proliferans, perforating injuries, etc., a modification of Müller's scleral resection operation is indicated. It consists of the excision of a two to six mm. wide by 12 to 16 mm. long crescentic piece of sclera over the region of the tear or the most dependent part of the detachment. The first scleral incision is made 9-12 mm. from the limbus and the second incision two-six mm. distal to same. The cut scleral edges are resutured with multiple chromic catgut sutures. The operation is time consuming, somewhat difficult to perform, and occasionally may be accompanied by loss of vitreous and severe hemorrhage, if the choroid is injured. However, enough cases resulting in improvement have been observed to warrant such drastic surgery where definite indications are present.

SKIN CANCER

Galen M. Tice, M.D., and Charles M. White, M.D.*

Kansas City, Kansas

Cancer of the skin is not only one of the most common malignancies encountered but also one of the most accessible. It occurs on areas where its presence is early brought to the attention of the patient. These factors, associated with its high rate of curability, make this cancer a singularly satisfactory one to treat.

The literature in this field is voluminous. It is not the purpose of this paper to add anything new, but rather to review our approach to the problem and to evaluate our results in the light of those obtained by others. Only in this way can one be sure that he is giving his patient the best that medical science has to offer.

MATERIAL

The therapy and results presented herein are based on a study of 358 cases treated by the senior author at the University of Kansas Hospital from 1933 through 1945. The pathology in each case was proved by biopsy. There were 221 other cases treated without biopsy either because the patient refused or because of the absence of help during the war years. These cases will not be included because the approach here is largely statistical.

The cases presented are selected. Only squamous cell, basal cell and mixed type epitheliomas are included. Melanomas and metastatic skin lesions belong in another group both pathologically and clinically. We have not included cases of squamous cell carcinoma of the lower lip feeling that they also should be analyzed separately because of their characteristic metastases.

BIOPSY

We feel it is relatively easy to make the clinical diagnosis of an epithelioma but to make a histological diagnosis of its cell type simply from observation is usually impossible. Daland[8] felt it unwise to biopsy skin cancers unless he thought there was considerable doubt as to its cell type. Others[34, 11, 30] however are of the opinion that the clinical differentiation between the two is unreliable. We have felt as Bogart[2] and Ullman[40] that biopsy is necessary for accurate diagnosis, but that in any event the initial treatment should be the same. Boggs[3] states that the squamous cell type requires two to four

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times more irradiation than the basal cell type. We believe that the subsequent possible overtreatment we may give a basal cell lesion is justified by the occasional case which on first biopsy is a basal cell epithelioma and then on subsequent biopsy after metastasis has occurred is shown to contain some areas of prickle cell elements which gave rise to the extension. We believe the two outstanding indications for biopsy are:

1. The possibility of metastasis in squamous cell cancer.
2. Protection in case of a lawsuit for radiation necrosis or telangiectasis.

We do our biopsies under local anesthesia taking the tissue from the edge of the lesion including a margin of normal skin. In the small epitheliomas we remove the entire lesion as the biopsy. We have not seen any ill effects from biopsy to contraindicate the procedure. As indicated above one should follow a case of squamous cell epithelioma closely with special attention to the regional nodes. The prognosis of the squamous cell type is not as good as that of the basal cell type. (See Table No. 4)

ETIOLOGY

The etiology of skin cancer appears to be largely that of some form of chronic irritation such as contact with coal tar products, actinic rays, inclemencies of the weather and uncleanliness[5]. In an ingenuous study devised to show the effect of excessive exposure to actinic rays Elliott[13] shows that there is a higher incidence of skin cancer in the southern states. In Fort Worth and Dallas 46 per cent of all cancer is primary in the skin while in Chicago 12.5 per cent is primary in the skin. We have been impressed by the number of skin cancers in the blond men from the wheat fields of Kansas. There seems little doubt but that actinic rays are an important factor but, needless to say, there are others.

PATHOLOGY

The basal cell carcinoma is described[5] as a waxy, elevated indurated nodule becoming "pearly" on the border and crusted in the center as it extends with a rolled undulant edge. They may or may not ulcerate. Some are solid or cystic while others are superficially expansive showing epithelialization in the center. Removal of the crust reveals a grayish base with oozing or bleeding. Although they may be divided into clinical types Hazen[17] feels that they all respond the same to therapy except the deeply infiltrating types. Foot[15] describes the histological picture of basal cell epithelioma as being composed of nests of cells connected with the overlying epidermis at one or more points. The nests of cells are serpiginous and geographic in outline. He believes that they are most likely of hair matrix origin.

The squamous cell carcinoma is described[5] as a spherical, elevated, indurated, crust covered lesion which may develop a deep, dirty, ragged, irregular, indurated ulceration. Foot[15] states that histologically if the cells are infiltrating the corium the tumor is definitely malignant. The tumor may be chiefly keratinized and only mildly malignant or chiefly acanthomatous and very malignant.

The epithelioma, containing both basal and squamous cell elements usually has the appearance of a basal cell cancer but behaves more like the squamous cell type. Mac Kee[22] quotes Montgomery as saying that 12.6 per cent of apparent basal cell tumors are of the mixed type. Lindberg's[21] figures are about the same. We found 14 of the mixed type compared to 239 of the basal cell type. Davis[9] states that basal cell tumors with apparent metastasis have developed squamous cell neoplasm at their margins and that the metastasis is squamous cell in origin. We have recently seen such a case.

EARLY HISTORY

Very shortly after Roentgen's announcement of his discovery of x-ray brave men began applying it as a therapeutic measure. Mac Kee[22] states that Stenbeck of Stockholm was the first to treat an epithelioma. The case was presented in 1899. Sequeira[33] treated 45 cases of rodent ulcer in 1900 finding that the ulcers healed quite rapidly. About the same time Blacker[1] noted that the x-ray might produce slow healing ulcers. He guarded against this by surrounding the lesion with lead foil and using protracted small exposures. In 1901 Sequeira formally reported 12 cases in which he obtained very gratifying results. Johnson and Merrill[20] were the first in America, reporting two cases of epithelioma treated in 1900. Moore[24] points out that the use of small protracted exposures used by the early men was a fractionated type of therapy much like that proposed more recently by Coutard and now finding considerable use.

X-ray was quickly taken up by quacks of all sorts with many disastrous results. Pusey[27] however, pointed out in 1913 that very definite beneficial results could be obtained with x-ray therapy. Since that period the x-ray has well earned its present respect.

INCIDENCE

Our series of cases consists of 358 patients with 363 skin cancers. The highest incidence occurred in the age decade of 70-79 while the average age was 68 for males and 65 for females. Our oldest male and female were both 92 while our youngest male was 22 and our youngest female was 29. Our age grouping agrees with Schrek[31]. The average age in Daland's series was 60.8 and the highest age incidence in Cholnoky's series[5] was in the decade of 60-69. Hazen[17] states that age has no influence on the results of treatment. This is in accord with our findings. The average age of our cures was 66 and of our recurrences it was 68.5.

The incidence of skin cancer in relation to sex is fairly constant according to several series reported in the literature. Our findings are much the same as those of other authors. (See Table No. I)

TABLE NO. I

Series	*Male*	*Female*
Tice & White	64%	36%
Cholnoky (5)	64%	36%
Daland (8)	60%	40%
Driver & Cole (12)	60%	40%
Sutton (37)	61.5%	38.5%
Sweitzer (39)	66.5%	33.5%

In our basal cell lesions 83 per cent of the females and 80 per cent of the males were cured with one series of treatment. This is in accord with Hazen[17] and Mac Kee[22] who say that results in women are slightly better than those in men.

Of the 363 lesions in our series 239 or 65 per cent are classed as basal cell type and 124 or 35 per cent are classed as squamous type. There were 14 of mixed baso-squamous type which are included in the squamous cell group. It is difficult to compare the figures on the incidence of the types of lesions because of the selection of cases present in most series and because most series reported in the literature are not all biopsied cases.

In general the skin cancers dealt with here nearly all occur on the exposed parts of the body and most especially about the face.

TABLE NO. II LOCATION OF SKIN CANCERS

Location	*Basal Cell*	*Squamous Cell*	*All Lesions*
Nose	65-76.4%	20-23.6%	85-23%
Cheek	51-63.7%	29-36.3%	80-22%
Eyelid	48-90.5%	5- 9.5%	53-15%
Temple	17-56.6%	13-43.4%	30- 8%
Ear	15-51.7%	14-48.3%	29- 8%
Forehead	13-68.1%	6-31.9%	19- 5%
Upper Lip	9-56.2%	7-43.8%	16- 4%
Neck	9-64.2%	5-35.8%	14- 4%
Dorsum Hand	1- 6.3%	15-93.7%	16- 5%
Others	11-52.3%	10-47.7%	21- 6%

Other authors[5, 13, 12, 37] report an incidence of location of skin cancers very similar to that which we have found. (See Table II) Schrek[31] has summarized his information on location saying that squamous cell growths have a marked predisposition for the ears, hands and upper part of the face in the order of frequency while the basal cell lesions prefer the upper part of the face, the nose, and the ears. In our series 85 per cent of all the basal cell lesions occurred on the face.

METHOD OF TREATMENT

It is almost a truism to say that there have been as many ways of treating skin cancers as there have been men doing it. This is probably a good thing as there is an effort for the most part to individualize cases. Obviously a deep infiltrating cancer of the eyelid cannot be treated the same as a small lesion of the cheek. The principal methods at hand for therapy are surgery including electrodessication, radium and the roentgen ray. By far the greatest majority of our cases have been treated using the roentgen ray. We occasionally treat small superficial lesions with a half-strength radium plaque giving about 12 erythema doses. In deeply infiltrative lesions we have used interstitial radium needles each containing two mgm of radium and filtered by 0.5 mm platinum. We adjust the dose according to the volume attempting to reach 8 to 10 erythema doses.

For our x-ray therapy we use low (90Kv) voltage. Filtration is selected rather empirically according to the thickness of the lesion. For quite superficial lesions we ordinarily use no filtration for half the treatment and ½ mm Al for the remainder. For the thicker lesions we may use 1 mm Al filtration and very rarely more. We generally use a focal-skin distance of 8 to 12 inches. Except for a margin of about one-fourth inch of healthy appearing tissue we protect the surrounding tissue with lead foil. We use a cone large enough to cover the field and an inch or so beyond so that if there is slight movement the lesion is not displaced from the x-ray beam. We have found it helpful, particularly in older patients, to use sandbags to aid in holding the head still during the treatment.

We have used the massive or intensive type of radiation therapy, usually delivering the full dose in three to four sittings all given within one week's time. Our general plan of treatment now in use for the common skin cancer is shown in Table III.

TABLE NO. III METHOD OF ROENTGEN THERAPY

Day	*KVP*	*Filter*	*r Units*
first	90	0	1250
second	90	0	1250
third	90	½ mm Al	1250
fourth	90	½ mm Al	1250
	Total		5000

From 1933 through 1938 the total dose given ranged from 1000 to 3000 r. In 1939 and 1940 about half the cases received from 2000 to 4500 r with the remainder receiving up to 6000 r. Since then we have applied 5000 r as the routine dose. On some of the larger lesions where back scattering is a factor a slightly smaller dose is used.

The only surgical measure which we have employed has been the removal of necrotic tissue. Some large lesions have been treated in cooperation with the plastic surgery department.

The treatment outlined is not at all original and is quite similar to that used by others. Martin[23] prefers to use the soft rays of radium or x-ray as the effect is desired in the first few millimeters of tis-

sue. He employs the massive dose technique using 140 KVP with 1 mm Al filter and giving 2500 to 3000 r at one sitting to basal cell lesions.

In treating the large protruding neoplasms Hunt[18] employs both irradiation and surgery. For the pendulous type he surgically removes the tumor and then irradiates the base. For the deeply infiltrating ones he uses interstitial radium. Hazen[17] employs a filter in therapy only when there is some deep induration. He feels that an area 3/8 inch wide beyond the confines of the tumor should be treated.

A more prolonged type of therapy is used by some. Elliott[13] first employs curettage followed by electrodesiccation and giving 600 to 800 r at intervals of four to seven days until a dose of 3000 r is reached. He feels that the massive dose method results in more telangiectasis. Nelson[25] employs the Coutard technique giving 200 to 750 r per treatment with a total dose that may go up to 10,000 r. He feels that a higher rate of cure is obtained and that there is less skin damage. Schreiner[30] however thinks that the tumor may become resistant to radiation by the application of small doses.

The more massive dose method giving about 5000 r within a week's time is used by Bogart[2], Dresser[11], Flood[14], Ullmann[40], Widmann[41, 42] and Wigby[43]. For the larger and deeper lesions most authors use higher KVP and more filtration. Stevens[36] precedes x-ray with electrothermic coagulation and in squamous cell lesions routinely irradiates the draining lymphatics. Feeling that soft rays of low voltage therapy leave viable cells in the tumor bed Sims[35] uses 200 Kv therapy with medium filtration. He gives 4000 to 6000 r and avoids tissue fibrosis by using a different angle of the x-ray beam each treatment.

Chaoul[4] made the effect of x-ray similar to radium by shortening the focus-skin distance and decreasing the voltage. Using this method one may give 8,000 to 10,000 r over one field without irreparable damage. He reports good results.

Moore[24] states that within limits, the voltage and filtration used are not particularly important for it is probably the quantity of x-ray rather than the quality which evokes the biologic response. Widmann[42] notes that the great variation of doses and type of treatment which give good results is most confusing.

No mention has been made of the use of caustics and cancer pastes which are so frequently used by various quacks. It must be admitted that they may achieve good results in the small basal cell lesion but they are more painful and the cosmetic result is inferior[7].

Before the accurate standardization of x-ray therapy radium was used very extensively in the treatment of skin cancer and some men still use it in preference to x-ray. Cole and Driver[6] use prolonged interstitial irradiation with heavily filtered platinum iridium radium needles of small intensity in certain cases. The filter is 0.5 mm Plat. and they give 1500 to 3000 mg hours. They also use this in treating metastatic nodes. Daland[8] employed radon seeds feeling that beta radiation is required to destroy cancer. He used 1 millicurie per cc. of tissue. Widmann[41] uses the gamma rays of radium for treating the tissue around a squamous cell lesion as well as on the actual lesion because of their ramifying and infiltrative character.

Many lesions can be treated by surgery alone. This is usually done by the Plastic Department because of the repairs necessary due to defects. Sutton[37] in reporting a rather large series of basal cell lesions states that 90 per cent were treated by excision alone. Ullman[40] points out that surgical excision should be the method of choice about the hands and wrists because the proximity of bone and connective tissue makes late radiation necrosis more likely.

Since radium and x-ray began to be used extensively for the treatment of skin cancer there has been considerable controversy over which should be used—radium, x-ray, or surgery.

Several authors[10, 16, 21, 29] prefer the use of x-ray because they feel that the cure rate is as high as with other methods and that the cosmetic results are better. Hazen[17] mentions that x-ray can reach places which are difficult to treat surgically but he feels that surgery is the best treatment for squamous cell lesions. Bogart[2] says that surgery texts frequently state that irradiation is not effective in the treatment of the squamous cell lesions. Boggs[3] felt that the problem was not one for surgery since it is nearly always necessary to remove too much healthy tissue. Schreiner's[30] objection that the surgeon tries to come too close to the margin of the lesion in order to obtain a cosmetic result, and thereby leaves tumor behind would probably not apply to the better trained surgeon of today. Dresser and Dumas[11] feel that with radium needles and radon it is difficult to get an even distribution of the dosage. This would probably depend on the experience of the radiologist. Davis[9] warns that when a lesion does not respond rather quickly to x-ray it should have surgery.

An important factor in clinical practice pointed out by Moore[24] and Martin[23] is that x-ray is more economical in time and money and requires no anesthesia. Economy of time is of considerable importance to us here. It seems that the mere fact that the controversy has not been settled one way or another would indicate that each method of treatment has its uses and that a single case may have need of all three. Moore[24] has said that surgery and irradiation are not rival measures but the proper management of cancer means the coordination of surgery,

x-ray, and radium. Widmann[42] makes much the same statement but adds that he prefers x-ray.

Therapy of lesions of the nose pose added problems because of the close proximity of bone and cartilage, and because of the likelihood of their involvement. Dowdy[10] is of the opinion that even if the underlying cartilage is involved the disease may be completely eradicated with roentgen ray therapy. He uses 200 Kv with an HVL of 1.6 mm Cu to treat these cases giving 300 r per treatment up to a total dose of 3500 to 6000 r.

In the earlier years here at the university hospital treatment of nose lesions varied from 1000 to 3000 r but more recently we have been treating them much as lesions elsewhere giving 4000 to 6000 r of soft (90 Kv) x-ray with ½ mm Al filtration. When there is invasion of the cartilage there is some deformity due to its loss but we have not had more recurrences here than elsewhere. (See table No. VI A and B)

Treatment of epitheliomas of the pinna of the ear is difficult because of the underlying cartilage. For the most part we have given 4000 to 6000 r using soft rays (90 Kv) with zero or ½ mm Al filtration. Some of the smaller lesions have been treated with 2000 to 4000 r. We have had good results (See Table No. VI A and B) with the basal cell lesions but have had a fairly high rate of recurrence in the squamous cell lesions. In these cases with cartilage involvement surgical removal is probably the better form of therapy. Hazen's[17] experience has been the same, and he suggests that they be handled by surgery. Sutton[38] uses x-ray therapy if there is no cartilage involvement. He recommends that the treatment be not enough to cause a severe reaction. When there is involvement of the cartilage he too recommends surgical excision.

We have treated cancer of the eyelid much the same as skin cancers elsewhere. Up to about 1940 they were given 1000 to 3000 r but since then they have been given about 5000 r usually in three or four treatments all given in from three to five days. Soft rays (90 Kv) have been used with 0 to 1 mm Al filtration. The focal-skin distance is usually eight inches. Protection of the globe is very important. We anesthetize the eye with a drop of two per cent butyn sulphate and then insert a formed and especially smoothed piece of lead between the lid being treated and the globe. This is taped in place and then lead foil is used to cover the surrounding healthy tissue. Conjunctivitis occurs rather commonly but we have had no cataracts of the lens. We have found the above method very suitable because it is simple, takes little time, and is effective. Hazen[17] reports a rather low (77 per cent) rate of cure in cancer of the eyelid compared to others. We had a rather high per cent of recurrence (See Table No. VI A and B) with only one treatment but most of these were cured with an additional massive treatment.

Driver and Cole[12] have had quite good results in the eyelid lesions using 133 Kv therapy giving 1500 to 2300 r most of which is unfiltered. They sometimes use fractionated therapy giving only 900 r every other day up to a total dose of 3200 to 6000 r. They protect the globe with 1 mm gold plated brass cups which are first coated with paraffin. For the thick lesions they use interstitial radium needles. It should be pointed out that one cannot protect the globe from gamma rays with 1 mm of lead or brass.

In treating his cases of eyelid lesions Hunt[19] anesthetizes the eye with one drop of 0.5 per cent pontocaine and then inserts an eyeshield to protect the globe. They develop considerable conjunctivitis and he mentions that glaucoma may occur. According to him a post-irradiation cataract may occur from 9 months to 12 years after the therapy, two years being the average time. The dose causing the appearance of a cataract is not definitely known but is estimated to be about 1 skin erythema dose.

Surgery is not used as much in cancer of the eyelid as in other locations because of the resultant scar. Simmons[34] early felt that irradiation was indicated here because of the better cosmetic effect. Martin[23] prefers to use radon seeds in the eyelid lesions. Robinson[29] preferred to use interstitial radium and pointed out that when there is invasion of the orbit the globe should be sacrificed so that adequate treatment can be given to the tumor. Peter[26] uses beta or very soft (44 KVP) x-rays in treating extension of the cancer onto the conjunctiva giving about 1800 r.

CURES

It is quite difficult to make an analysis of cures and compare them with other series because of the difference in selection. In our series we have included only cases which have remained cured for one year or more. We have been influenced in this by Mac Kee[22] who says that the majority of recurrences manifest themselves in less than a year. In our own series there were 38 recurrences in the basal cell lesions with 60 per cent occurring in the first year. In

TABLE NO. IV CURES AND FAILURES

	Cured With 1st Therapy	*Cured With Added Therapy*	*Total Cured*	*Failure*
Basal Cell	171-82.7%	26-12.5%	95.2%	10- 4.8%
Sq. Cell	63-70.8%	8- 8.9%	79.7%	18-20.3%
Total	234-79.1%	34-11.7%	268-90.5%	28- 9.5%

the squamous cell lesions there were 29 recurrences with 79 per cent occurring in the first year. It is interesting to note here that 68 per cent of our recurrent basal cell lesions were cured with additional therapy while only 28 per cent of the recurrent squamous cell lesions could be cured.

Our cure rate of 95 per cent in basal cell lesions and 80 per cent in squamous cell lesions or 90 per cent when all lesions are considered compares favorably with those reported in the literature. (See Tables IV and V)

TABLE NO. VI B

Failure and Recurrence in Squamous Cell Lesions According to Location. 27 per cent of Recurrences Included had Metastases When First Seen

Location	*Cured*	*Recurred*	*% Recurrence*
Nose	15	4	21%
Cheek	16	7	30%
Eyelid	2	1	33%
Temple	8	3	27%
Ear	7	5	41%
Forehead	4	2	33%

TABLE NO. V CURE RATES BY VARIOUS AUTHORS

Author and Year	*Method of Treatment*	*Cure Rate*	
Chaoul (4) 1936	X-Ray	All Cases	93%
Dachtler (7) 1917	X-Ray	All Cases	90%
Flood (14) 1939	X-Ray	Basal Cell	96%
		Squamous Cell	82%
Driver and Cole (12) 1939	X-Ray	Eyelid Cases	94%
Hazen (17) 1925	X-Ray	All Cases	93%
Widmann (41) 1932	X-Ray	Superficial	87%
		Infiltrating	57%
Wigby (43) 1940	X-Ray	All Cases	85-95%
Mac Kee (22) 1938	X-Ray	All Cases	91%
Elliott (13) 1946	Electrodissection and X-Ray	All Cases	97%
Stevens (36) 1924	Electrocoagulation and X-Ray	Basal Cell	90-100%
		Squamous Cell	41-100%
Daland (8) 1926	Radium	Early Cases	81%
		Moderately Advanced	48%
Simmons (34) 1919	Radium	Immediate Cures	72.5%
Cholnoky (5) 1945	Surgery	Basal Cell	96%
		Sq. Cell (No ear cases)	87%
Tice and White 1947	X-Ray	Basal Cell	95%
		Squamous Cell	80%

RECURRENCES AND FAILURES

Comparing statistics on the number of recurrences is difficult because of the difference in the selection of cases and because most series do not separate basal and squamous cell type lesions. In our 239 cases of basal cell cancer there were 38 or 16 per cent recurrences. The squamous cell lesions are more difficult to evaluate. If we include those with metastases when first seen there were 124 total cases with 29 or 23 per cent recurrence. If cases with metastases are not included the per cent of recurrence drops to 18. We have already pointed out that 68 per cent of our recurrent basal cell lesions and 28 per cent of the recurrent squamous cell lesions were cured with additional therapy. (See Table VI A and B)

TABLE NO. VI A

Failures and Recurrences in Basal Cell Lesions According to Location

Location	*Cured*	*Recurred*	*% Recurrence*
Nose	47	11	18%
Cheek	38	7	15%
Eyelid	30	8	21%
Temple	14	2	12%
Ear	14	2	12%
Forehead	9	2	18%

The number of recurrences which we have had compare favorably with those listed in the literature. (See Table No. VII)

TABLE NO. VII

No. of Recurrences

Author and Year	*Region*	*Basal or Sq. Cell*	*% Recurrence*
Mac Kee (22), 1938	All Areas	Basal Cell	13%
	Ear	Both	25%
	Eyelid	Both	9%
Quigley (28), 1923	Face	Both	10%
	Eyelid	Both	7%
	Ear	Both	22%
Schrek (31), 1941	All Areas	Basal Cell	21.5%
	All Areas	Sq. Cell	17.8%
Simmons (34), 1919	All Areas	Both	21.4%
Stevens (36)	All Areas	Both	23%
Tice and White, 1947	All Areas	Basal Cell	16%
	All Areas	Sq. Cell	18%

One factor influencing the number of recurrences is the size of the original lesion. Both our squamous and basal cell lesions which recurred were on the average larger than those which were cured with one series of treatment. (See Table No. VIII.) This is

in accord with Hazen[17] who reported his cures in relation to size.

Under ½ inch — 99%
½—⅞ in. — 89%
1—1¼ in. — 63%
1½—2 inch — 42%
Over 2 inches — 58%

Dresser and Dumas[11] found that in lesions 1 cm or more in thickness there was a high rate of recurrence because the base, or tumor bed received too little irradiation.

TABLE NO. VIII

Size of Cured and Recurrent Lesions

	Cured	*Recurrent*
Average Size Basal Cell	2.0 cm	2.8 cm
Average Size Sq. Cell	2.4 cm	3.7 cm

In our series the age of the patient had no significant effect on the percentage of the recurrence. Mac Kee[22] reports the same and also states he obtained slightly better results in females. We found the difference so slight as to be of little significance.

In an effort to determine the relationship between the size of the treatment and number of recurrences we have tabulated the results for both the basal and squamous cell lesions. (See Table No. IX A and B)

In our tabulation of squamous cell cases there is rather uneven distribution of cases so that some of the results are not statistically significant. Our largest group of cases is in the 5000 r range and they have the lowest percentage of recurrences.

TABLE NO. IX A

Size of Treatment and Recurrences in Squamous Cell Cancer. 27% of Recurrences had Metastasis When First Seen

Size of Initial R	*Number of Cases*	*Cured*	*Recurred*	*% Recurrences*
0 to 999 r	2	1	1	50%
1000 to 1999 r	13	10	3	23%
2000 to 2999 r	11	8	3	27%
3000 to 3999 r	5	3	2	40%
4000 to 4999 r	25	17	8	32%
5000 to 5999 r	32	25	7	22%
6000 to 6999 r	3	2	1	33%

TABLE NO. IX B

Size of Treatments and Recurrences in Basal Cell Cancer.

Size of Initial R	*Number of Cases*	*Cured*	*Recurred*	*% Recurrences*
0 to 999 r	3	2	1	33%
1000 to 1999 r	40	36	4	10%
2000 to 2999 r	38	32	6	15%
3000 to 3999 r	26	18	8	31%
4000 to 4999 r	37	32	5	13%
5000 to 5999 r	64	58	6	9%
6000 to 6999 r	5	4	1	20%

The same is true in the basal cell epithelioma series. It is more striking if one compares the basal cell lesions that received from 4000 to 5999 R which had 10.8 per cent of recurrences with the cases receiving 1000 to 3999 r which had 17.3 per cent recurrences. We believe that the difference is great enough to justify the use of the higher doses particularly since they are attended with so few complications.

Another factor influencing the response to therapy is the previous irradiation which has been given to the lesion. Widmann[41] and Stevens[36] both feel that if a lesion has had previous irradiation it is more resistant to subsequent irradiation therapy. It is for this reason that Stevens feels that therapy should be completed in one to two sittings. Hazen[17] states that previous roentgen or radium therapy cuts the cure rate to 52 per cent. Only 10 of our cases had received previous irradiation and only five of these could be cured with one series of treatments, with two additional being cured by added irradiation. Pre-

Figure 1. W.H., July, 1935, age 52. Biopsy, squamous cell epithelioma. Treatment, x-ray, 1700 r. Died five years later from other causes. No recurrence. Six-year cure.

vious surgery had no effect upon the response to treatment in this series.

The causes for recurrence after the initial treatment appear to be many. Hazen[17] lists the following:

Growth too extensive
Cartilage involvement
Previous radiation
Growth in scar tissue
Too small an exposure

Bogart[2] feels that failure is largely due to inadequate dosage. We agree with the items in Hazen's list and would like to add that too close shielding of the lesion may be a factor in recurrence. The larger lesions are also much more apt to recur.

Figure 2. J.R., April, 1942, age 64. Biopsy, basal cell epithelioma. Treatment, x-ray, 4760 r, globe protected. Living now with no recurrence. Sight remained in left eye until one year ago when lost in an accident. Five-year cure.

COMPLICATIONS

The complications of irradiation therapy for skin cancer have been discussed but little in the literature. This is probably because of their relative rarity. Telangiectasis is often considered as a complication but replacing a malignant neoplasm with a scar that may contain a little telangiectasis should hardly be considered as a complication.

Figure 3. C.P., November, 1942, age 80. Biopsy forehead, squamous cell. Biopsy nose, basal cell. Treatment, 6500 r to forehead tumor, 5120 r to nose tumor. Still living. No recurrence. Five-year cure.

Most of the ulcerated tumors are infected when first seen. In our experience this infection rapidly subsides with boric acid soaks and x-ray therapy. Hemorrhage was a rather common occurrence in our advanced cases with metastases. The destruction of tumor that has invaded the wall of an artery may give rise to hemorrhage. In this way at least it is a complication of the irradiation.

We have had but little telangiectasis in our cases. When it did occur it was not very marked and was in cases with lesions which were quite large. Nearly all of our scars have been thin, greyish white and soft and pliable. Widmann[41] however feels that if over 3000 r is given to lesions of 1 to 2 cm that delayed healing and thick telangiectatic scars may result. This has not been our experience.

Chronic radiation ulcers have not been rare in our series having an incidence of 4.6 per cent in the 363 lesions treated. The greatest majority has occurred in the lesions receiving from 4000 to 6000 r. (See Table No. X). Nearly all of these have been repaired by relatively simple plastic surgery. Widmann[41] uses 5000 to 10,000 r on large lesions and states that radiation necrosis is not a serious factor but he gives no frequency percentages.

TABLE NO. X

Chronic Ulcers in Relation to Size of Treatment.

Size of Treatment	*Number of Ulcers*
0 to 1999 r	1
2000 to 2999 r	1
3000 to 3999 r	2
4000 to 4999 r	6
5000 to 5999 r	6
6000 to 6999 r	1
Total	17
Incidence in Series	4.6%

The chronic ulcers tend to occur when the lesions are on surfaces closely applied to bone. It still seems the best policy to use the massive treatment of 5000 r rather than risk a recurrence which might not respond to further radiation.

Figure 4. E.K., January, 1934, age 59. Biopsy, basal cell epithelioma. Treatment, x-ray 3500 r. No recurrence by 1946. Twelve-year cure.

Figure 5. E.S., December, 1938, age 49. Biopsy, multiple basal cell epithelioma, Bowen's disease. Treatment, x-ray, 2300 r to each. No recurrence in 1946. Eight-year cure.

Figure 6. I.H., January, 1939, age 90. Biopsy, squamous cell epithelioma. Treatment, x-ray, 8490 r plus 3840 r to one margin six weeks later. Died three years later of other causes. No recurrence. Three-year cure.

SUMMARY

1. A series of 358 patients with 363 skin cancers proved by biopsy is presented with analysis of cures and recurrences compared to those presented in the literature. Treatment most often used was Roentgen ray irradiation.

2. In this series of cases the basal cell epithelioma showed a cure rate of 95.2 per cent and the squamous cell a cure rate of 79.7 per cent. The overall cure rate was 90.5 per cent.

3. The massive type of x-ray therapy is not only more effective than the fractionated type but also is more economical in time saved for both the patient and physician.

4. Skin cancer may be cured by surgical methods, radium, or x-ray or by a combination of the three. One should use the method in which he is most proficient.

5. Chronic radiation ulcer is the only significant complication of x-ray therapy for skin cancer. It occurred in 4.6 per cent of our cases and was generally handled easily by plastic repair.

BIBLIOGRAPHY

1. Blacker, Arthur B.: Proceedings of Section of Dermatology of British Medical Association. British Med. Jour., 2:849, 1901.
2. Bogart, Franklin: Irradiation Treatment of Cancer of the Skin. Radiology, 36:12, 1941.
3. Boggs, Russell H.: Treatment of Epithelioma by Radium. American Journ. of Med. Science, 158:87, 1919.
4. Chaoul, H.: Close Roentgen Irradiation as Substitute for Radium Therapy. Journ. A.M.A. Berlin letter, 107:1823, 1936.
5. Cholnoky, Tibor: Cancer of the Face. Annals of Surgery, 122:88, 1945.
6. Cole, H. N. and Driver, J. R.: Radium Dosage and Technique in Carcinoma of the Skin. Am. Journ. Roentgenol. and Rad. Ther. 33:682, 1935.
7. Dachtler, H. W.: Roentgenological Treatment of 530 Cases of Malignant and Other Tumors of the Face. Am. Journ. Roentgenol. and Rad. Ther., 4:599, 1917.
8. Daland, Ernest M.: End Results of Radium Treatment of Skin Cancer. Journ. A.M.A., 86:471, 1926.
9. Davis, Warren B.: Basal Cell Lesions of the Nose, Cheek and Lips. Annals of Surgery, 119:944, 1944.
10. Dowdy, Andrew H.: Roentgen Ray Therapy of Skin Cancer. N. Y. State Journ. Med., 40:621, 1940.
11. Dresser, Richard and Dumas, Charles: Treatment of Cancer of the Skin by Divided Doses of High Voltage Roentgen Rays. Am. Journ. Roentgenol. and Rad. Ther., 36:332, 1936.
12. Driver, J. R. and Cole, H. N.: Epithelioma of the Eyelids and Canthi. Am. Journ. Roentgenol. and Rad. Ther., 41:616, 1939.
13. Elliott, Joseph and Welton, David: Epithelioma. Arch. Dermat. and Syph., 53:307, 1946.
14. Flood, Phillip and Smithers, D. Waldron: Short Distance Low Voltage X-Ray Therapy. British Journ. Rad., 12:462, 1939.
15. Foot, Nathan Chandler: Pathology In Surgery. Lippincott, Philadelphia, 1945.
16. Sharp, George S.: Treatment of Cancer of the Eyelids. Discussion by Goar, Everett L., Journ. A.M.A., 111:1617, 1938.
17. Hazen, Henry H. and Whitmore, Eugene: Results In Roentgen Ray Treatment of Cutaneous Cancer. Am. Journ. Roentgenol., 13:144, 1925.
18. Hunt, Howard B.: Treatment of Large Protruding Carcinomas of the Skin and Lip by Irradiation and Surgery. Am. Journ. Roentgenol. and Rad. Ther., 44:254, 1940.
19. Hunt, Howard B.: Cancer of the Eyelid Treated by Radiation. Am. Journ. Roentgenol. and Rad. Ther., 57:160, 1947.
20. Johnson, Wallace and Merrill, Walter: X-Rays in the Treatment of Carcinoma. Phil. Med. Journ., 6:1089, 1900.
21. Lindberg, Ludwig: Basal Cell Epitheliomata. Jour. Arizona M. A., 2:35, 1945.
22. Mac Kee, G. M.: X-Rays and Radium in the Treatment of Diseases of the Skin. Third Edition, Lea and Febiger, Philadelphia, 1938.
23. Martin, H. E.: Radiation Therapy in Skin Cancer. Am. Journ. Cancer, 19:605, 1933.
24. Blair, Vilray; Moore, Sherwood and Byars, Louis: Cancer of the Face and Mouth. C. V. Mosby Co., 1941.
25. Nelson, Marque: Fractional X-Ray Treatment of Skin Cancer. Jour. Oklahoma M. A., 37:47, 1944.
26. Peter, Gustav: X-Rays and Radium Treatment in Tumors of the Conjunctiva. Radiology, 24:745, 1935.
27. Pusey, William Allen: What can be Done in Cancer With Roentgen Rays? Jour. A.M.A., 61:552, 1913.
28. Quigley, D. T.: The Treatment of Superficial Cancer With Statistics and Technique. Am. Jour. Roentgenol. and Rad. Ther. 10:161, 1923.
29. Robinson, G. Allen: Cancer of the Eyelids. Am. Jour. Roentgenol. and Rad. Ther., 38:743, 1937.
30. Schreiner, B. F., Simpson, B. T. and Muelle, Theodore: Diagnosis and Treatment of Basal Cell Epitheliomas. Am. Jour. Surgery, 33:1, 1919.
31. Schrek, Robert and Gates, Olive: Cutaneous Carcinoma. Arch. of Path., 31:411, 1941.
32. Sequeira, James H.: A Preliminary Communication in the Treatment of Rodent Ulcer by the X-Rays. British Med. Jour., 1:332, 1901.
33. Sequeira, James H.: Proceedings of Section of Dermatology of British Medical Association. British Med. Jour., 2:849, 1901.
34. Simmons, C. C.: Treatment of Carcinoma of the Skin. Boston Med. and Surg. Jour., 181:477, 1919.
35. Sims, George P.: High Voltage Roentgen Irradiation of Accessible Cancer of Skin and Mucous Membranes. Radiology, 37:666, 1941.
36. Stevens, J. Thompson: Statistics and Technique in the Treatment of Superficial Malignancy with Radium, Roentgen Rays and Electrothermic Coagulation. Am. Jour. Roentgenol. and Rad. Ther., 11:241, 1924.
37. Sutton, Richard L.: Carcinoma of the Skin. Jour. Missouri M. A., 39:203, 1942.
38. Sutton, Richard L.: Carcinoma of the External Ear. Jour. A.M.A., 74:88, 1920.
39. Sweitzer, Samuel: An Analysis of Forty-Three Cases of Skin Cancer. Jour. A.M.A., 69:179, 1917.
40. Ullman, Henry J.: Cancer of the Skin: A Statistical Report. Radiology, 46:279, 1946.
41. Widmann, Bernard P.: Unfiltered Roentgen Rays for Superficial Cancers of Wide and Deep Involvement. Am. Jour. Roentgenol. and Rad. Ther., 28:526, 1932.
42. Widmann, Bernard P.: Radiation Therapy in Cancer of the Skin. Am. Jour. Roentgenol. and Rad. Ther., 45:382, 1941.
43. Wigby, Palmer and Cohen, Meyer: Radiation Therapy of Carcinoma of the Skin. Radiology, 35:70, 1940.

It is well known that the incidence and severity of illness are greater among the urban poor than among the more prosperous groups. Ignorance is a factor in promoting high sickness rates, but ignorance is in part a result of poverty.—Med. in the Changing Order, Rep. New York Acad. Med. Comm., The Commonwealth Fund, 1947.

PREFRONTAL LOBOTOMY, A METHOD OF TREATMENT FOR CHRONIC MENTAL ILLNESS*

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"Consciousness is the mere surface of our minds, of which, as of the earth, we do not know the inside, but only the crust."—Schopenhauer.

HISTORICAL

The surgical interruption of the nerve fiber tracts situated in the prefrontal area, that is, in the frontal lobes anterior to the motor strip, is a comparatively recent procedure for the treatment of selected patients suffering with chronic mental illness. Such medical historians as Clendening[2] have found, however, that primitive man also practiced, "psychosurgery". Primitive medicine men by means of crude instruments made trephine holes to allow the escape of evil spirits which were believed to be causing the unfortunate patient's illness.

The newness of this therapy in its modern form becomes even more impressive when it is realized that the first formal type of prefrontal lobotomy performed on a mental patient was done by Egaz Moniz, just 12 years ago—on November 12, 1935. In 1936, Moniz[7] published a monograph, announcing to the medical world the results of 20 cases treated by interruption of a portion of the fibers constituting the white matter in the prefrontal area of the brain.

Freeman and Watts,[3] in this country, being aware of the urgent need for additional types of psychiatric therapy, recognized the possibilities of prefrontal lobotomy from Moniz's work, and with their own modified technique applied his principles to the problem of mental illness in America. These physicians were the leaders and simulators of this form of therapy in the western hemisphere. Today prefrontal lobotomy is being increasingly accepted by neuropsychiatrists throughout the world as a valuable weapon in their armamentarium for the struggle against mental illness.

EXPERIMENTAL BACKGROUND

Research in neurology during the 20th century may be characterized by an increased interest in the function of the frontal lobes of the brain. Many experimental and clinical studies of this region have been reported during the last 40 years.

Fulton and Jacobson,[4] in 1934, studied frontal lobe function in chimpanzees. They observed that when this experimental animal is placed in a frustrating situation, he usually becomes excited and has "temper tantrums". They found the chimpanzee's usual reaction to frustration to include urination, defecation, shaking the bars of the cage, crying, and rage behavior.

Surgical extirpation of the frontal areas of chimpanzees results in a marked change in their behavior. They show a varying degree of apathy, and often fail to show any motor reaction to a previously frustrating situation. The postoperative animal appears indifferent to an experimental problem. Fulton and Jacobson[4] found that operated chimpanzees seem unable to remember new sensory impressions. Following surgery, the animals showed no actual motor weakness or disturbance but they were obviously unable to organize their movements along a specific pattern. A "frontal area chimpanzee", one from which both frontal areas have been removed, appears restless, distractable and facetiously calm. It has been suggested that the removal of the frontal areas, which diminishes the memory of recent events, increases the importance of immediate sensory clues as determining motor responses. This results in a profound alteration in the chimpanzee's behavior, and among other things, prevents the appearance of complex behavior patterns, including experimental neuroses.

Among many other investigators, Ward and McCulloch,[8] have studied the projections of the frontal lobe to the thalamus and hypothalamus. The experimental technique of physiological neuronography was applied by these workers to this study. By means of this technique they found that if strychnine is applied to small areas of the frontal cortex, electrical activity at these sites can be recorded with needle electrodes placed in various hypothalamic nuclei. Such experimental evidence indicates that specific frontal areas "fire" to specific portions of the thalamic and hypothalamic regions. Despite these experimental accomplishments, many areas of the frontal lobes remain uncharted.

CLINICAL BACKGROUND

Patients with frontal lobe brain damage, whether by trauma, tumor, or direct surgical attack, show behavioral, emotional and cognitive changes. These clinical observations were studied after World War I by both neurologists and neurological surgeons.

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Goldstein[5] described these behavioral alterations as "concrete behavior". The accumulated data on circumscribed lesions in the frontal area and the surgical removal of one or both frontal lobes gave the opportunity for correlation of experimental evidence with clinical findings.[4] At the International Neurological Conference in London in 1935, a major symposium was held on all available data on frontal lobe function. In the courageous mind of Moniz, who was present at that meeting, was born the possibility of a new form of physical therapy for the mentally ill.

TECHNIQUES

Moniz first attempted to do a prefrontal lobotomy by injecting alcohol into the frontal lobes, but rejected this method for actual surgical removal of cores of white matter from the frontal lobes. With experience he gradually increased the number of cores of white matter removed bilaterally. Later he undercut the fibers on each side by means of a wire. Freeman and Watts modified the technique described by Moniz. They used a lateral approach in which they severed the white matter in the four quadrants in the prefrontal area. Lyerly[6] improved over the previous "blind" surgical techniques by utilizing a superior surgical approach and subcortical incision which could be done under continuous, direct vision.

Numerous techniques have been proposed to accomplish the result ascribed to prefrontal lobotomy. Some have advocated unilateral prefrontal lobectomy, others bilateral prefrontal lobectomy. More recently, interest has been increased in a transorbital surgical approach. Those who recommend this latter technique feel that incision related to the orbital cortex alone may be adequate to accomplish the desired changes in the psychotic patient.

The term prefrontal lobotomy has become limited to that surgical procedure in which the white matter is cut in all four quadrants of the prefrontal area of both cerebral hemispheres. Leucotomy refers to any procedure in which the white matter is not severed in all four quadrants of both prefrontal areas.

INDICATIONS FOR PREFRONTAL LOBOTOMY

Because of the comparatively recent development of prefrontal lobotomy, it is difficult to make dogmatic generalizations with reference to those cases which will benefit from this operation. There is a great need for more complete preoperative, operative and postoperative correlative studies to aid in the selection of cases for this treatment. At present, it seems indicated in those patients who are believed to be chronically ill, who have not responded to all other forms of acceptable treatment, and who have not shown any indication of spontaneous remission from their illness. Schizophrenics who have been ill for a minimum of two years and who have not responded to insulin and electro-shock therapies, or for whom these types of therapy are contraindicated, are potential candidates for prefrontal lobotomy. Manic-depressive patients who have had repeated attacks over a period of years with progressing periods of incapacity, the latter having persisted for at least 50 per cent of the time, can be anticipated to show improvement with prefrontal lobotomy.

An involutional psychotic who has been ill for more than three years and who has failed to respond to at least two series of convulsive shock therapy, or in whom shock therapy is contraindicated, or whose life is in jeopardy because of the psychosis, should be given the benefits of prefrontal lobotomy. This procedure is also indicated in a severe obsessional compulsive disorder which is of at least three years duration, which has not responded to other therapies, and which has resulted in total incapacitation of the patient. Relief of intractable pain may be accomplished by prefrontal lobotomy in those patients where less radical procedures have proved ineffective or contraindicated. Experience at present would indicate that prefrontal lobotomy is contraindicated in chronic alcoholism, drug addiction, psychopaths and sexual deviates. It has been observed that those patients who show marked evidence of deterioration from the psychotic process are not good candidates for prefrontal lobotomy.

POSTOPERATIVE RESULTS

Prefrontal lobotomy is not a specific remedy for any particular mental disorder, but it often relieves the state of morbid emotional tension and distress and it disrupts the behavior pattern dependent upon these states. Immediate postoperative changes include emotional flattening, diminished spontaneity, lack of attention, indifference, loss of judgment, euphoria, unresponsiveness, talkativeness, disorientation and perseveration. The patient may be incontinent of urine and feces for a period of a few weeks. Transitory aphasias, hemiplegias and the appearance of abnormal reflexes have been reported in the immediate postoperative course. Autonomic effects which have been noted frequently include lowering of blood pressure, bradycardia, increased sugar tolerance and an increase of free hydrochloric acid in the gastric secretion. The most striking immediate postoperative effect, however, is frequently the dramatic relief from morbid anxiety and tension. It has been observed that the severity of the postoperative course is related to "the placing of the incision" in the subcortical area of the frontal lobe. Thus the more posterior the cut is made, the greater the akinesia. The immediate postoperative undesirable effects are temporary and have usually cleared

within a few weeks. The postoperative psychiatric convalescence, however, may extend up to three years. It is extremely important during the postoperative convalescent phase that the patient receive continuous psychotherapy. Unless adequate psychotherapeutic management is afforded the patient during his convalescence, his chances for recovery become minimal.

Assessment of postoperative results in general is difficult because of the lack of uniform terminology. Secondly, there have been many variations in the neurosurgical procedure itself. About 5,000 cases have been reported to our knowledge from the English speaking countries. The present over-all picture suggests that approximately 30 per cent of the patients subjected to this procedure have been able to resume their existence outside of the hospital, and have been able to support themselves. Another 20 per cent have been able to leave the hospital and to live with their families. Some 30 per cent are considered improved as compared to their preoperative status but require continued hospitalization. About 20 per cent show little to no improvement and included in this group is a small percentage, about two to five per cent, who may be considered to have been made worse by the procedure. The mortality rate varies between two and five per cent.

CONCLUSION

Those who have had practical experience with prefrontal lobotomy agree to the importance it is assuming in our present treatment of the mentally ill. Although some are critical of the procedure because of their lack of experience with it, criticism in others may stem from deep-rooted unconscious antagonism. It is interesting to note that those countries in which psychoanalysis was most firmly rooted were in general the last to accept and use this technique. Such reluctance to accept prefrontal lobotomy may be useful in curbing the over-enthusiastic and impetuous exponents of all physical methods of psychiatry.

BIBLIOGRAPHY

1. Brickner, R. M.: *The Intellectual Functions of the Frontal Lobes.* New York, MacMillan Company, 1936.

2. Clendening, Logan: *The Romance of Medicine.* New York, Garden City Publishing Company, 1943.

3. Freeman, W., and Watts, J. W.: *Psychosurgery.* Baltimore, C. C. Thomas Company, 1942.

4. Fulton, J. F., and Jacobson, C. F.: The Functions of the Frontal Lobes. *Fifteenth International Congress Advances in Modern Biology* IV, 113, 1935.

5. Goldstein, K.: *The Organism.* New York, American Book Company, 1939.

6. Lyerly, J. G.: Transsection of the Deep Association Fibers of the Prefrontal Lobes in Certain Mental Disorders. *The Southern Surgeon,* Vol. 8, 1939.

7. Moniz, E.: *Tentative operatoires dans le traitment de certaine psychoses.* Paris, Masson, 1936.

8. Ward, A., and McCulloch, W. S.: The Projection of the Frontal Lobes on the Hypothalamus. *The Journal of Neurophysiology,* Vol. X, No. 4, July, 1937.

RUPTURED ECTOPIC PREGNANCY COMPLICATING A NORMAL INTRA-UTERINE PREGNANCY

Jack Tiller, M.D.
Wichita, Kansas

The presence of a combined intra and extra-uterine pregnancy, while rare, is by no means so unusual that it should not be given consideration when one is confronted by an early pregnancy with signs of threatening abortion, or by an early pregnancy with an acute abdomen.

According to Novak,[7] the first case of combined intra and extra-uterine pregnancy was reported by Duverney in 1708. The diagnosis was made at autopsy, the mother having died in the third month of pregnancy as a result of rupture of the extra-uterine pregnancy. In 1913 Neugebauer[30] reported a total of 244 cases gathered from medical literature. Novak, in 1925, reviewing the literature from 1913 to 1925, was able to collect 32 new cases and add two cases of his own, thus bringing the total to 278 cases. A review of the quarterly cumulative index from 1925 to July, 1946, shows 22 additional cases reported. These, plus the case reported below, bring the total to 300.

In reviewing the literature one is immediately impressed with the paucity of cases reported in the United States. Since 1913 a total of 54 cases have been presented; of these, 15 occurred in the United States, and of these 15 cases, seven were operated for the ruptured ectopic gestation and the patients subsequently delivered normal infants from six to seven months after the date of surgery. The remaining eight cases lost both the ectopic and intra-uterine pregnancy. Several cases have been reported in which both the ectopic and intra-uterine pregnancy progressed to term without accident and both were delivered alive with the aid of surgery.

REPORT OF CASE

Mrs. N. T., an obese white female, 23 years of age, appeared in my office on the afternoon of March 22, 1946, complaining of severe lower abdominal pain and distress, the onset of which had occurred suddenly just after she had arisen that

morning. Just prior to the onset of the pain she had noticed that there had been a small amount of vaginal spotting of old dark blood during the night.

The last menstrual period had begun on February 2, 1946, and was normal with respect to time of occurrence, duration, amount of flow, and the usual absence of discomfort. Her menstrual periods began at age 11 and were regular every 28 days until the occurrence of her only pregnancy which had terminated spontaneously in July, 1943, after a duration of three and one-half months with no sequela or complications. The patient had complained of infertility since the miscarriage and had been on a reducing diet and thyroid gland extract for several months prior to onset of present illness.

Physical examination was as follows: weight 190 pounds, height five feet, temperature 100°F, blood pressure 110/60, pulse 86; heart and lung fields were essentially normal; marked tenderness and pain to both pressure and rebound pull were present in both lower quadrants; no definite rigidity could be found. Pelvic examination was unsatisfactory due to the obesity of the patient and the pain present, but it was felt that there was a suggestion of a small, indefinite mass present in the right adnexa, while the uterus and left adnexa were apparently normal. The cervix was soft and closed with a small amount of dark blood escaping from the os.

The patient was admitted to St. Joseph Hospital for observation. The admission erythrocyte count was 4,010,000, Hbg. 80 per cent (Hagen), white blood count, 7800 with a differential of 28 lymphocytes, 70 polymorphonuclears, and two monocytes. Urinanalysis was reported essentially within normal limits. The patient was kept under observation for four days, during which time the vaginal bleeding (very slight) ceased after the second day, the pain subsided, but she continued to remain sore to pressure over the lower abdomen, blood count remained the same as of admission, with no significant elevation of the white blood count or any lowering of the red blood count or hemoglobin. Although a tentative diagnosis or ectoptic pregnancy was entertained, the clinical and physical and laboratory picture could also be easily fitted into a possible early uterine pregnancy with a troublesome mass in the right adnexa, throwing the patient into a state of threatened abortion. The Aschheim-Zondek test had been reported as positive.

A consultation was held on the fourth hospital day. A tentative diagnosis of ectopic pregnancy was made, even though the uterus did seem to be a little larger than normal. It was felt that this slight enlargement was the sympathetic enlargement that sometimes accompanies an ectopic pregnancy. It was agreed that surgery was indicated.

The patient was taken to surgery on the fifth hospital day and under a general anesthetic the abdomen was opened through lower right rectus incision. The right tube contained a ruptured ectopic pregnancy. A small parovarian cyst was also present which was adherent to the tube. There were several old blood clots in the cul-de-sac, with a total volume of approximately 150 cc. Both ovaries and the left tube presented no pathology. The uterus was slightly enlarged and soft, but no discoloration was present. A right salpingectomy was done, the blood clots removed, and the abdomen closed without drainage. The post-operative course was uneventful and the patient was dismissed on the tenth postoperative day.

The pathological report of the specimen removed at surgery is as follows:

Gross Pathology. Specimen consists of previously opened Fallopian tube about 1½ cm. thick and a 1½ cm. parovarian cyst attached by a slender pedicle to its serosa. There is also a separate 2½ cm. ovoid chocolate mass consisting largely of blood clot.

Microscopic Pathology. Microscopic sections of the blood clot show numerous chorionic villi.

Diagnosis: ectopic pregnancy.

On May 10, 1946, the routine six weeks' postoperative examination was done. During this time there had been no vaginal bleeding and the patient had had a normal convalescence. The pelvic examination revealed the uterus to have the typical enlargement of a three months' pregnancy. The patient was placed on routine prenatal care. The date of confinement as calculated from February 2, 1946, was November 9, 1946. On November 6, 1946, after a normal labor, a six pound 11½-ounce normal male infant was delivered. Both the baby and the mother have done nicely during the past year. The mother is now three months pregnant with no complications.

COMMENTS

According to Beck,[31] the diagnosis of ectopic gestation in a Fallopian tube at the time of its abortion or rupture, whether internal into the lumen of the tube or external into the abdominal cavity, is easily made when the abortion is accompanied by a massive, diffuse hemorrhage into the peritoneal cavity associated with severe lower abdominal pain, rapid appearance of shock and a small amount of vaginal spotting of blood. These findings, when accompanied by a history of a skipped period and supported by physical examination showing lower abdominal tenderness with a painful mass on one side of the uterus, make the diagnosis even more positive.

Too often, however, this clear-cut picture is not present because the hemorrhage into the abdominal

cavity is very slight and is intermittent in character; consequently, the pain is only moderate and there may be only discomfort in the lower abdomen. When mild symptoms are associated with an unsatisfactory pelvic examination as in an obese or uncooperative patient, the diagnosis becomes confused with other pelvic conditions. Particularly one must consider an early threatened abortion in which no dilatation or relaxation of the cervix is as yet present. It is estimated that the condition was correctly diagnosed preoperatively in less than five per cent of the cases coming to surgery before three months of gestation.

Below are listed some of the diagnoses made preoperatively:

1. Ruptured ectopic pregnancy (no suspicion of uterine pregnancy present).
2. Uterine pregnancy with acute appendicitis.
3. Abortion of uterine pregnancy with rupture of uterus.
4. Uterine pregnancy with volvulus or strangulation of adnexa tumor.

At the time of operation for the ruptured ectopic pregnancy, the uterus may be found to be sufficiently enlarged (2½ to 3 months, or larger) to make a definite diagnosis of an associated intra-uterine pregnancy, or the enlargement may be so insignificant as to be entirely overlooked and the diagnosis completed by pelvic examination a month or six weeks later as in this case.

There appears to be little doubt that these are true twin pregnancies (superfecundation) as contrasted with a superimposed pregnancy upon the other (superfetation). It would be difficult to prove a superfetation, while the proof of the superfecundation is had by the size of the ectopic pregnancy and the size of the uterus at the time of surgery.

SUMMARY

A case of combined intra and extra-uterine pregnancy with successful surgical removal of the ruptured extra-uterine pregnancy and subsequent normal delivery of a healthy, full-term infant 7½ months later is reported. A total of 15 cases have been reported as having occurred in the United States since 1913. All of these were subjected to laparotomy for the ruptured ectopic gestation with subsequent survival of the uterine pregnancy in seven cases; the other eight miscarried or were interrupted by surgery, hence a uterine fetal mortality of 54 per cent.

Since submitting the paper for publication, two other cases of ruptured tubal pregnancy combined with uterine pregnancy have been reported in the quarterly Cumulative Index ending with July, 1947. In one,[32] a salpingectomy was done for the ectopic pregnancy and the uterine pregnancy carried to full term with resulting normal living infant. In the other,[33] the ectopic pregnancy was operated but the uterine pregnancy miscarried at six months.

BIBLIOGRAPHY

1. Lawrence & Elsemore: Am. J. Obst. Gynec. 48: 709-713, November, 1944.
2. Martin & Meyer: Am. J. Obst. & Gynec. 36: 1071-1072, December, 1938.
3. Dolan, E. J.: J.A.M.A. 110: 1438-1439, April, 1938.
4. Milnor & Bowles: Am. J. Obst. & Gynec. 40: 511-512, September, 1940.
5. Kohn & Burchord: J. Christian M. A., 20: 193-194, November, 1945.
6. Howard, G. T. Jr., South, M. J. 38: 788-799, December, 1945.
7. Novak, E. J. Surg., Gynec. & Obst. Vol. XLIII: 26-37, July, 1926.
8. Boldt. Am. J. Obst. LXXV: 865, 1917.
9. Curtis, Surg., Gynec. & Obst. 1918 XXVII, 232.
10. DuBose. South, M. J. 1915, VIII, 784.
11. Keyes, New York M. J. 1923, CXVIII, 611.
12. Matthews. Med. Sentinel, 1924, XXXII, 154.
13. Sullivan, J. Am. M. Ass., 1917, LXVIII, 843.
14. Miltra. J. Obst. & Gynec. Brit. Emp., 47: 206-212, April, 1940.
15. Gerin-Lajoie. Union Med. du C n d, 68: 384-386 (April).
16. Rabago, Gac. Med. de Mexico, 74: 155-160.
17. Giordano. Semana Med. 2: 1816-1818, December, 1936.
18. Neumann. Monatschr. F. Geburtsch. U. Gynak, 104: 265-275, February, 1937.
19. DeGeus. Zentralbl. f. Gynak., 59: 3030-3034, December, 1935.
20. Lenczowski. Ginek. Polska. 13: 369-379, April, 1934.
21. Rocha Maia. Rev. de Gynec. d'obst. 26: 476-478, October, 1932.
22. Filho. Rev. de Gynec. d'obst. 26: 473-475, October, 1932.
23. Bello. Rev. Med. de Canarias, 1: 159-162, April, 1932.
24. Dartiqueo. Bull. et. Mem. Soc. de Med. de Paris, pp. 260-265, April, 1932.
25. Franchini. Rassegna d'Ostet. e. Ginec., 40: 787-797, December, 1931.
26. Crimeni. Rinasc. Med., 9:42, January, 1932.
27. Modiano. Bull. Soc. d'Obst. et de. Gynec., 20: 228, April, 1931.
28. Schubert. Zentralbl. f. Gynak., 53: 2268-2275, September, 1929.
29. Gerin-Lajoie. Canad M.A.J., 20: 38-40, January, 1929.
30. Neugebauer. Gynaek. Rundschau. 1913, VII, 809.
31. Beck. "Obstetrical Practice" (William & Wilkins, Publishers) 1939.
32. Gruenewald: Am. Jnl. Obst. Gynec. 53: 341-342, February, 1947.
33. Belson, M. O.: Am. Jnl. Obst. Gynec. 53: 883-884, May, 1947.

Changes in Academic Rank

The academic rank of 17 doctors on the staff of the University of Kansas Medical Center was changed, according to a recent announcement by Chancellor Deane W. Malott. All were promotions. The doctors, their new positions and their fields are as follows:

Clinical professorships—Dr. LaVerne B. Spake, otorhinolaryngology; Dr. Buford G. Hamilton, obstetrics and gynecology; Dr. Ferdinand C. Helwig, pathology and oncology.

Associate professorships—Dr. Tom R. Hamilton, pathology and oncology; Dr. Paul W. Shafer, surgery; Dr. Ward W. Summerville, pathology and oncology; Dr. Sylvia Allen, psychiatry and neurology; Dr. E. H. Trowbridge, psychiatry and neurology; Dr. A. M. Ziegler, surgery; Dr. Damon Walthal, pediatrics.

Assistant professorships—Dr. Max A. Allen, medicine; Dr. M. L. Bills, psychiatry and neurology; Dr. G. L. Harrington, psychiatry and neurology; Dr. David Robinson, surgery.

Instructors—Dr. Harry Statland, Dr. T. Reid Jones and Dr. Gordon Voorhees, all medicine.

HORMONE THERAPY IN CANCER OF THE BREAST

Hormone therapy is palliative only, and should never be used in any case of breast cancer in which there is any hope of cure by radical surgery with or without x-ray therapy.

ESTROGENS

The most favorable effects are in soft tissue manifestations of breast cancer in women over the age of 60. Reports of effects on skeletal metastases are not conclusive, although the pain incident to these lesions may be decreased.

The most commonly used agent is diethylstilbestrol given orally in doses of 10-15 mg. daily. Other estrogens, either natural or synthetic, may be as effective.

Contraindications and Warnings: 1. Do not give estrogens to any patient who still menstruates or who has menstruated within a five year period, as doing so will accelerate the rate of growth of the carcinoma.

2. Large doses eventually produce uterine bleeding, and the dosage must then be diminished at least temporarily.

3. Side effects include anorexia, nausea and vomiting, skin eruptions, diarrhea, and edema. Administration should be cautiously carried out in those elderly women subject to cardiac decompensation which may be precipitated by the retention of fluid.

4. Never use estrogens if the lesion is operable.

Anticipated Effects: 1. Regressions in the size of the primary tumor, soft tissue recurrences, lymph node metastases, and pulmonary metastases.

2. Some improvement in general physical condition—increase in appetite, gain in weight, and acceleration of hemopoiesis.

3. There may be a decrease in the pain of skeletal metastases.

4. Relapse after a temporary improvement; estrogens will not cure cancer of the breast.

ANDROGENS

Androgens are useful in cases of bone metastases, regardless of the age of the patient.

The commonly used agent is testosterone proprionate by injection. 100 mg. is given three times a week for 10 weeks, followed by a maintenance dose of 60 mg. of methyl testosterone daily for 10 weeks (Adair).

Contraindications and Warnings: Cases of metastatic bone lesions with a high blood calcium level have been made extremely ill by androgen therapy—nausea, vomiting, and prostration. Blood calcium levels should be determined before starting therapy, and if found to be high should be checked during the treatment.

Anticipated Effects: 1. Relief from the pain (of bone lesions), increased appetite, a gain in weight, and a decrease in the amount of narcotics required to control the pain. (Compare with the effect of castration in cases of prostatic carcinoma with bone metastases.)

2. An increase in the alkaline phosphatase from the normal level of 3-5 units, to one of 15-17 units. This is evidence of repair and regeneration of bone. Excessively high levels (25-50 units) may mean liver damage or metastases.

3. Masculinizing effects may be manifest especially in younger patients, and at times a disturbing increase in sexual desire is noted.

4. Relapses after a variable time, when another course of treatment may be given. Androgens will not cure cancer of the breast or its metastases.

(Prepared by the Committee on the Control of Cancer, in condensed form from the report of the *Subcommittee on Steroids and Cancer* of the *Council on Pharmacy and Chemistry* of the AMA)

ACUTE DIARRHEA IN INFANCY

Diarrhea in infancy should always be considered as potentially severe and treated immediately in order to prevent the development of dehydration and disturbances of electrolytic balance. Management should be carried out as follows:

1. *Determination, if possible, of the cause.* The causes of infantile diarrhea include:
   Improper feeding, infections of the gastrointestinal tract itself, and infections outside of the gastrointestinal tract (frequently otitis media)
2. *Resting the intestinal tract, followed by giving of food adapted to the limited digestive capacity.*
   Breast fed infants: Omit feedings for 8-12 hours, giving boiled water instead. Then resume feedings, giving a few ounces of boiled water before nursing for the next few feedings. The mother's breasts should be pumped during this period to maintain her milk supply.
   Artificially fed infants: Discontinue all foods for a variable number of hours, depending on the severity of the diarrhea, giving boiled water or 5% glucose solution freely. Then resume feeding with a low calorie formula such as boiled skimmed milk, or raw apple pulp, and gradually build up the diet starting with non-irritating, readily digestible food. Some small infants will tolerate better an acidified skimmed or evaporated milk formula, or powdered protein milk.
3. *Restoration and maintenance of fluid and electrolyte balance.* Severe diarrheas with dehydration, and those not responding to simple treatment will require a longer period of starvation and the replacement by parenteral fluids of water and electrolytes lost:
   1. 10% Dextrose in distilled water intravenously (10 cc. per pound of body weight for each infusion) and Hartman's Solution or normal saline subcutaneously (15-20 cc. per pound for each clysis).
   2. In cases of very severe dehydration, Darrow's sodium-potassium-lactate solution is an important addition, but must be given slowly and with full knowledge of its action.*
   3. When severe acidosis is present, 1/6 Molar Sodium Lactate solution should be given, the amount being determined by the following formula: normal serum CO_2 less the patient's serum CO_2 times body weight in pounds equals cc. of 1/6 M. sodium lactate solution, given over a period of several hours.
4. *Supportive treatment.* Oxygen. Plasma and blood transfusions (but blood should not be given until dehydration has been corrected). All vitamins, if parenteral therapy is prolonged.
5. *Drug therapy.*
   Parenteral infections should be treated with penicillin (10,000-25,000 units in aqueous solution every 3 hours or 100,000-300,000 units daily of one of the more slowly absorbed preparations) or, after dehydration has been corrected, sulfadiazine (½ grain per pound initial dose, 1 grain per pound per day thereafter), as indicated.
   Bacillary dysentery should be treated with sulfadiazine or one of the non-absorbable sulfonamides. It is suspected when blood and pus appear in the stools, and proved by stool culture.
   Cathartics are usually contra-indicated. More than one dose should never be given.
   Paregoric should not be given to small infants, or to any infant during the acute toxic phase or in the presence of distension.
   Bismuth is of questionable value and in any case should never be given as the subnitrate because of the danger of nitrite poisoning (methemoglobinemia).
   Various pectin preparations are harmless and may be effective in mild cases.

* A review of Darrow's work is available on request from the Committee on Child Welfare which may be addressed in care of this Journal.

PRESIDENT'S PAGE

Dear Doctor:

Do you realize that this year is one-third gone?

Things are shaping up very well. There is every indication for plenty of activity in medical affairs following summer vacations.

The Council will meet in September with a full agenda. Several committees will be meeting or holding repeat meetings during that month.

One of the most important meetings scheduled for September will be a conference of all county society presidents and secretaries. The program of each state society committee and other pertinent acts will be presented so that these programs may be activated in each local society.

Some thought is being given to the establishment of a "Sunflower Heart Conference" in Kansas, comparable to the Rocky Mountain Cancer Conference which has proved so highly successful. I would be happy to hear your reaction to the idea.

The postgraduate section of the Medical School Committee, working in conjunction with Dean Murphy's committee from the medical school, is completing arrangements for what appears to be a most attractive series of graduate training courses at the University Medical Center, plus a circuit series of refresher courses to be presented at convenient centers over the state during the fall and winter months.

I am hoping that arrangements can be made for joint meetings of the surrounding societies at each of these centers, at which time I will try to meet with each group and discuss state society matters of interest.

On numerous occasions one hears the comment made that a law should be passed to prevent this or that group from using the title "Doctor" before their names. Wouldn't it be a good idea for each M.D. in the state to set an example of such dignity by ceasing to sign his name "Doctor .....," by having the "Doctor" removed from his office sign or stationery and properly using the "M.D." for all purposes.

You will be pleased to learn of the progress made in the interests of Blue Cross and Blue Shield at a recent meeting of a joint executive committee of the two boards. Basic operation policies were outlined which will enhance the program immensely.

Political battle lines have been drawn throughout the state and over the nation. Now is the time to lend your influence to the candidate you KNOW will be considerate of your interests.

We are heading toward our 90th anniversary meeting in which we hope we can feature our past presidents and celebrate many accomplishments of Kansas medicine.

Sincerely yours,

President.

EDITORIALS

Streptomycin

During recent weeks a number of scientific articles have appeared in medical journals to warn the profession of the dangers of the use of streptomycin. The following information represents a summary of two of these articles, the first entitled "Streptomycin" by Hirsh et al appearing in the June 1948 Medical Annals of the District of Columbia and the second, "Streptomycin Therapy of Tuberculosis," by Farber et al appearing in the July 1948 issue of California Medicine.

Since its discovery in 1944 streptomycin has been clinically tried in a sufficient number of cases to permit an evaluation of its usefulness. The response of acute tularemia to small doses of streptomycin (0.4 to 2.0 Gm. daily) is undoubtedly the most dramatic accomplishment of this drug. It appears that good response has been recorded in its use in the treatment of shigella infections and cholera. It has been used as an adjunct in the treatment of venereal disease, but has been strikingly ineffective in the treatment of typhus infections, the salmonella infections and in brucellosis.

Foremost interest in this drug arose from early reports that streptomycin inhibited the growth of tubercle bacilli in vitro and that tuberculous infection in guinea pigs was retarded. Some hundreds of human patients have now been treated (543 cases reported in November 1947) and the picture is still uncertain.

Streptomycin is not recommended for primary phase tuberculosis or its re-infection stage. It is of doubtful value in moderately and far advanced pulmonary tuberculosis, and results for such conditions as osseous tuberculosis, tuberculous lymphadenitis, enteritis, etc., have been so variable that no recommendations can be made at this time.

In cases with fibrous or caseous lesions streptomycin has little effect but appears to be most useful in exudative pulmonary tuberculosis, except where this is only part of a terminal phase of overwhelming infection. The drug may have real merit and find a permanent place in medicine, but the time for its general use has certainly not yet arrived, stories found in lay magazines to the contrary notwithstanding.

The use of streptomycin is dangerous. Tubercle bacilli become resistant to streptomycin. In one series 95 per cent resistance was recorded after from 90 to 120 days use in human patients. It has been observed as early as the 35th day. From present indications it appears that this is permanent and that further use of streptomycin will be ineffective.

A second problem is the extreme variability of its usefulness and the fact that relapse after completion of treatment is frequent. Clinical experience has not borne out the promise suggested by results in vitro. Even for conditions where the use of streptomycin seems to be indicated there are enough individual failures and relapses to leave considerable doubt as to its general value.

The third danger, and certainly not the least important, is the number of serious toxic reactions that occur during treatment. Local irritation is annoying but less frequent since the product has been purified, and by adding one per cent solution of procaine hydrochloride to the streptomycin solution this can generally be controlled.

There is, however, a definite irritation to the meninges, which may result in serious and perhaps irreversible reactions without significant early symptoms. Damage to vestibular function occurs in almost all patients receiving streptomycin in prolonged courses and the majority of cases will never recover from that loss. Patients may experience difficulty in walking in the dark. Some will partially compensate in time, but the process is slow. Loss of hearing is another complication resulting too frequently to be dismissed without consideration. This may progress to total deafness and is presumably permanent.

Streptomycin therefore is not yet recommended for general or frequent administration. The physician should weigh the dangers of its use against the urgency of its need. While loss of vestibular function is not of serious import to the average patient in comparison with the disease for which streptomycin would properly be administered, it is serious enough to cause the physician to use this drug with caution.

Sludged Blood

There appeared in Science for November 7, 1947, an article by Melvin H. Knisely, Edward H. Block, Theodore S. Elliot and Louise Warner, entitled "Sludged Blood." The reporting of this scientific discovery marks a great milestone in the science of medicine. This report also culminates 15 years of intensive work on the problem of intravascular agglutination, a universal natural phenomenon occurring in all veterbrates whenever a pathological disturbance occurs.

Knisely and his co-workers utilized over 3500 healthy frogs, 1000 salamanders and 500 laboratory mammals substantiating their discovery. They observed sludged blood in 600 human patients suffering from 60 different well diagnosed diseases.

Fifty healthy unanesthetized medical students were used as normal controls. The validity of the results cannot be questioned. Unusual as it may sound, our profession should not object to the terminology "sludged blood" for that phrase describes intravascular agglutination. It is a term borrowed from the oil industry that the layman understands, and the medical profession is interested in educating the public. This type of education is necessary for a well planned preventive medicine program in our state or elsewhere. Knisely's article in Life magazine (May 31, 1948) is an excellent example of popular education so vitally needed in the medical field.

Sludged blood was found in all patients (so far studied) suffering from a common cold to those with chronic disease. It is produced locally by small irritations. It is also found in all surgical cases to a small or large degree. Knisely frankly states that the cause is unknown. The problem now before us is to prevent and break up the sludge when it appears. Sludging damages tissues by depriving them of oxygen and food. This may be acute or it can act accumulatively. The accumulative effect may hasten the aging process. Clearing up of sludges would then hold back senility. There are numerous problems to be solved in this most universal prevailing condition. We know now that our dis-ease and malease are caused, to a great extent, by sludge. We have also overlooked a very fundamental fact that the sludge symptoms have overshadowed the underlying pathology and its symptoms. Future investigations in the field of sludged blood will be an attempt to clear up the sludge in order that the diagnostician may clearly see the underlying pathology. *—Paul G. Roofe, Professor of Anatomy, University of Kansas.*

Postgraduate Education Fund

Continued interest has been evidenced in the Kansas Medical Society's postgraduate education fund, and Dr. Harold H. Jones of Winfield, chairman of the Sub-committee on Postgraduate Education, has prepared an outline of the action that has been taken since the fund was established at the start of World War II. Dr. Jones has served as chairman of the group since the plan originated, and the Society is indebted to him for many hours of work on the project.

The committee was originally set up by the Council for the purpose of establishing a continuous program of graduate education, but later provided that the fund subscribed by members of the Society on a voluntary basis was to be distributed exclusively among returning servicemen, to be applied toward expenses of graduate education.

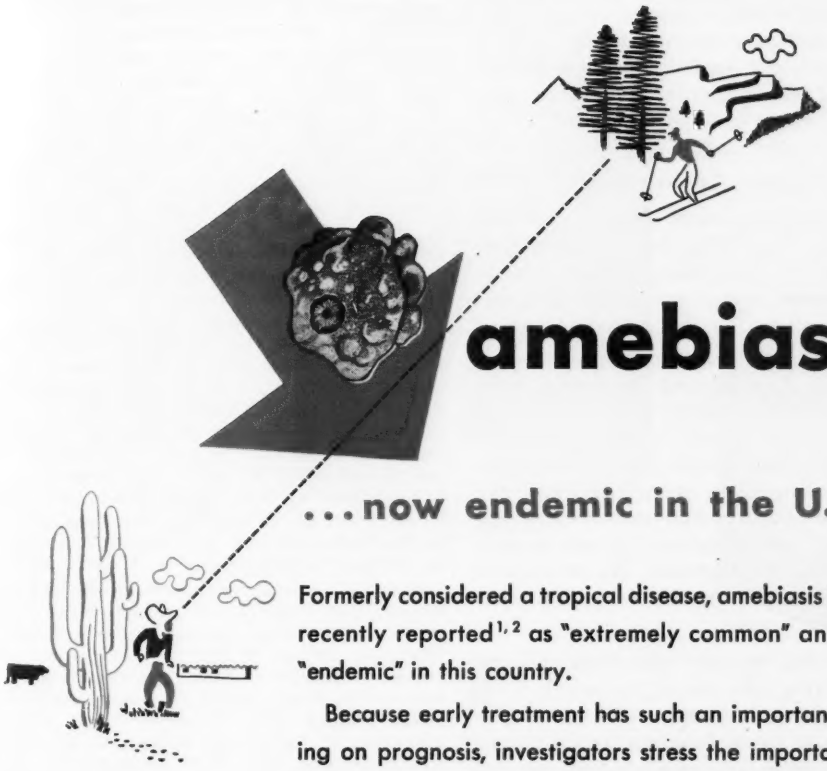
This program, unique among medical societies of the United States, had a two-fold purpose; first, to recognize the differential between civilian and military practice, and, second, to express appreciation to those physicians who entered military service from Kansas. The committee estimated that an average of 12 weeks refresher work would be required by physicians who were returning to civilian practice after having served in the armed forces. All members realized that the fund would not be large enough to defray complete costs of such courses, but it was felt that the stipend would express the appreciation of the Society for the sacrifices made by physicians who gave up civilian practice and spent from one to four years in military service.

From approximately 1,000 members of the Society who retained civilian status during the war, a fund of about $50,000 was contributed. Benefits from the fund were scaled to conform to the length of time required for the refresher course chosen by each physician. To date, grants from the fund have been paid to 122 physicians. The committee will continue to receive applications for benefits until January 1, 1949, after which time, in accordance with a decision made by the Council, no further grants will be authorized.

Since this educational benefit was available to all medical officers who returned to Kansas after service in the armed forces, it was suggested that a grant of some kind be provided for the widows and dependents of medical officers who lost their lives in service, and in 1947 the House of Delegates asked the committee to investigate this possibility. The committee complied and reported its findings to the House of Delegates at its first meeting in 1948, recommending that approximately $3,600 be appropriated from the postgraduate fund for grants to the families of several physicians who died while serving in the armed forces. The House unanimously approved the expenditure and provided for a year-to-year review of the project so that additional funds may be appropriated in the future if necessary.

The Kansas Medical Society takes a special pride in this project since no other professional organization in the United States has reported similar action, either for the token remuneration of the returning medical officer or for grants to the widow of a physician who lost his life in service. The generosity of those who created the fund reaffirms the ideal that medicine is a profession, not a business.

Certain lessons can be learned from the work of this committee. Educators throughout the nation who have been familiar with the ideals of the Society and the existence of this postgraduate education



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1. Chalgren, W. S., and Baker, A. B.: Tropical Diseases: Involvement of Nervous System, Arch. Path. 41:66 (Jan.) 1946.

2. Browne, D. C.; McHardy, G., and Spellberg, M. A.: Statistical Evaluation of Amebiasis, Gastroenterology 4:154 (Feb.) 1945.

3. Manson-Bahr, P.: Some Tropical Diseases in General Practice: "A Post-War Legacy," Glasgow M. J. 27:123 (May) 1946.

fund, have urged that the Society continue this experiment, having in mind a more or less continuous postgraduate educational program. Surveys are now being made with this possibility in mind and the committee will issue a complete report at the next meeting of the House of Delegates.

Committee Appointments

Committee appointments for the year 1948-1949 may be found on Page VIII of this issue of the Journal. The chairmen and many complete committees were appointed several months ago but publication of the official list was postponed until it could be accurately set up in its entirety.

The problem of appointing committees is the first that confronts a president upon his inauguration. Each president attempts to take geographical distribution into consideration along with the selection of individuals whose interest and experience will contribute to the projects studied. This year Dr. Davidson wrote the secretary of each component society asking for suggestions. All replies were carefully studied and in virtually every instance the suggestions were accepted.

It will be noted that some committees are larger this year than they have been in the past. It is Dr. Davidson's hope that committee activity will play a greater part in society functions for the coming year. Tentative projects for each have been prepared and sent to the chairmen. Many committees were given detailed assignments which will be broken down into sub-committees, each concentrating on a special task. By way of example, five important sub-committees are now functioning under the Committee on Allied Groups. There are three in the Committee on Mental Health and several under the Committee on Anesthesiology. With the coming of cooler weather, these committees will meet and several others will organize in similar fashion.

The projects undertaken by the Kansas Medical Society that have been truly important have virtually all stemmed from committee action. During the coming year the Society will hear much of other projects that are now being prepared. At least five of these new committees have already been in session during the summer and several have begun planning toward activities in which they hope ultimately to have the cooperation of every member of the profession. As these projects are developed and approved by the Council, they will then be reported in detail for adoption by the membership.

New Doctors of Medicine

The Kansas State Board of Medical Registration and Examination announces that 59 new doctors of medicine were licensed to practice in Kansas as the result of examinations given June 9 and 10 and at the same time 35 physicians were granted licenses by reciprocity.

A list of those who successfully passed the examination follows: Gloria M. Allen, Burbank, Calif.; Irving W. Bailit, Brockton, Mass.; Ernest L. Bauer, Benton, Ill.; Leon L. Bernstein, Topeka; Doris M. Bixby, Valley Center; Victor E. Bolton, Abilene; William R. Brown, Kansas City; James R. Burwell, Kansas City; James P. Calkins, Kansas City, Mo.; James P. Carey, Pickens, S. C.; Robert F. Cavitt, Wichita; Jack W. Clapper, Kansas City; Harold N. Clark, Jr., Kansas City, Mo.; Franklin D. Close, Jr., Forestville, Calif.; Charles S. Davis, Galena; Robert W. Doering, Emporia; Robert W. Edwards, Lawrence; Gustave Eisemann, Kansas City, Mo.

Billy D. Ferguson, Mission; Harry G. Gianakon, Hutchinson; Wallace W. Gist, St. Francis; Wendell L. Good, Perry; Sebel V. Hands, Garden City; William N. Harsha, Topeka; Robert E. Hull, Wichita; John W. Jacks, Coats; Donald W. Jackson, Cincinnati, Ohio; Chester L. Klein, Lawrence; Glenn A. Lessenden, Lawrence; Franklin M. Lockwood, Kansas City, Mo.; Paul T. Luckenbill, Kutztown, Pa.; Rensselaer W. McClure, Jr., Lawrence; Dean M. Miller, Kansas City; Don R. Miller, Kansas City; Luciel C. Nance, Kansas City; Robert A. Nelson, Tulsa, Okla.; Kay K. Ota, Kansas City; Jack W. Passmore, Concordia; John R. Patterson, Kansas City; Lew W. Purinton, Pleasanton.

Bethel L. Reimer, Independence, Mo.; Warren R. Rupper, Provo, Utah; Veryl D. Schwartz, Wichita; Hampton W. Shirer, Topeka; Marvin M. Somers, Kansas City; Robert D. Stewart, Wamego; Joe L. Stockard, Lees Summit, Mo.; Robert P. Stoffer, Topeka; Ben Storer, San Antonio, Tex.; Frank J. Strick, Jr., Kansas City; Roland D. Stucky, Reedley, Calif.; Forrest D. Taylor, Hill City; Christopher Y. Thomas, III, Pittsburg; Wayne K. Tice, Kansas City; Charles W. Wahl, Louisiana, Mo.; Dorothy S. Waterman, Kansas City, Mo.; James R. Weaver, Wichita; Karl T. Wolf, Kansas City; Robert W. Wright, Jr., Kansas City.

Licenses by reciprocity were awarded to the following: Glen K. Arney, Topeka; Jerome E. Bleicher, Wichita; Harold S. Bowman, Wichita; Harold W. Brooks, Wichita; Francis P. Cawley, Hooker, Okla.; Fenwick W. Chappell, Topeka; Frederick H. Chard, Wichita; Donald J. Cronin, Wichita; Wallace C. Ellerbroek, Wichita; Nicholas J. Ellis, Croswell, Mich.; Matthew R. Fitzpatrick, Kansas City; Phillip E. Getscher, Wellington; Kenneth L. Graham, Leavenworth; Creighton A. Hardin, Kansas City; Paul D. Hess, Kansas City, Mo.; Edwin R. Jacka, Ann Arbor, Mich.

Robert J. Kinney, Topeka; Harry A. Knauff, Syracuse; John O. Kennedy, Topeka; Raymond W. Latham, Kansas City, Mo.; Anson S. Lutgen, Colby; Herbert P. MacNeal, Topeka; Elbert L. McCorkle, Horton; Norman C. McCubbin, Concordia; Ernest Marcus, Topeka; Joseph A. Masaryk, Sharon, Pa.; Ray T. Parmley, Wichita; Frank I. Ridge, Kansas City, Mo.; Robert E. Stowell, Kansas City; Erling B. Struxness, Hutchinson; Ellsworth H. Trowbridge, Jr., Kansas City, Mo.; Edgar W. Warren, Topeka; Charles M. White, Wichita; Samuel Zelman, Topeka; Henry D. Moorman, Winfield.

Annual Session May 9-12, 1949

The 1949 annual meeting of the Kansas Medical Society will be held at Topeka, May 9-12. Members of the Shawnee County Medical Society will be hosts for the session.

Modern Similac is a complete, laboratory modification of cow's milk providing fat, protein, carbohydrate, and minerals in breast milk proportions—and in forms chemically and metabolically resembling those food substances as found in breast milk.

Simple Feedings are prepared simply by adding the Similac powder to water in proportions prescribed.

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EXECUTIVE OFFICE

Material for this column is taken from articles coming to the attention of the Executive Office. They may concern controversial issues and will not necessarily reflect the editorial opinion of the Journal. Articles republished or summarized here are presented because it is believed they will be of interest to the medical profession in Kansas.

Hospital Construction in Kansas

A recent pamphlet published by the Kansas State Board of Health describes the Kansas plan of hospital construction. In it are listed the current priority ratings of the various areas and much other information concerning the general subject. Physicians especially interested in this material may obtain copies of the pamphlet from Dr. F. C. Beelman.

A report from national sources indicates that 46 states and territories already have state-wide plans approved, involving 272 individual projects. These include 244 hospitals, 23 health centers and five auxiliary facilities. It is of interest to know that only 23 of these hospitals will have 100 beds or more and that by far the greatest number are under 50 beds. Another portion of the announcement indicates that the smaller communities will receive the bulk of the funds under the federal program and that projects have been approved in only 10 towns in the United States with a population of 50,000 or more. Ninety-three are in communities with less than 2,500 people. The above statistics include information as of May 15, 1948, and may be somewhat changed since that time.

The Kansas plan follows largely along the national trend according to information in this pamphlet. It has been estimated by the Kansas Advisory Hospital Council that the state should have an additional 3,089 general hospital beds. Many of these are needed in sparsely settled areas. There is also a need for approximately 4,000 additional psychiatric beds, 3,500 chronic beds and 500 beds for tuberculosis patients. In addition to that, it has been estimated that where Kansas now has 16 full-time health units, there should be 32 in the state.

At least half of the total hospials in Kansas have 25 beds or less, of which 27 per cent are reconverted residence dwellings. Of all Kansas hospitals, one-third are considered fire hazards and about one-fourth of the total are 40 or more years old.

State-wide planning hopes to prevent over building but at the same time to insure adequate hospital facilities for everyone. Procedure under that plan has been to divide the state into three types of areas. There are only two of the first kind, or base areas, in Kansas. They are Kansas City and Wichita. Of the second type Kansas has 11 areas, and all remaining portions of the state are of the third or rural classification. Selection of locations and priority ratings has been made on the basis of population distribution, transportation facilities, the location of trade centers and the distribution of physicians.

With that in mind and being governed by federal regulations imposed in the Hill-Burton bill, the Advisory Council has now given priority ratings to all counties in the state. These are rated alphabetically with Group A representing the highest priority. Five areas have been so designated in Kansas, being considered now to have 29 per cent or less of their normal hospital needs. Group B includes areas that have some 30 to 49 per cent of their hospital needs, of which there are nine in Kansas. There are five areas under Group C, rated between 50 and 59 per cent. Group D represents those areas having 60 to 69 per cent of their normal complement of hospital beds, comprising seven areas, and the last group, E, containing 14 areas, has between 70 and 100 per cent of the hospital facilities that appear to be necessary. In the latter group are three rated at 100 per cent. The location under Group A that is given first priority is recorded as now having only 18 per cent of the hospital beds necessary within that area.

Of interest also are the various rules and regulations of the Kansas hospital construction program. A general description of the proposed plan was first published in the Topeka Daily Capital and the Topeka State Journal of October 14, 1947. A public hearing was held on October 27, 1947. The state plan was approved by the United States Public Health Service on January 20, 1948. A project construction schedule will now be formed and the first units under this program may be built. These will be determined after consideration of the priority of the project, the intention of the sponsoring agency to begin construction within a reasonable length of time, the ability of the sponsoring agencies to meet their obligations, and finally with a view toward maintaining an appropriate balance of the various categories such as general, tuberculosis, mental, chronic disease hospitals and public health centers. Whenever a project is removed from the project construction schedule, the next highest priority will replace it. In this action the project that was removed will not necessarily lose its priority rating but may only face postponement of actual construction.

Other details concerning records and reports are included, and an explanation of the manner in which appeals may be made from the decision of the Advisory Council is also given. Maps identifying the various areas give the priority ratings of each location. In general, it is an analysis of Kansas' plan to utilize the money appropriated under the Hill-Burton act for hospital construction. It is Kansas' plan to provide the people of this state with scientifically designed hospital facilities. The pamhlet itself contains much information on this subject and represents a project that has taken a vast amount of effort, much of this having been contributed for the benefit of the people of Kansas by members of the medical profession.

Committee on Nursing Reports

A change in the present method of training nurses was recently recommended by the American Medical Association committee appointed to study the problem, according to a report submitted to the A.M.A. House of Delegates at its Chicago meeting in June. The recommendation called for two main groups, the professional nurse and the trained practical nurse.

The committee also recommended correction of economic problems affecting both nurses and patients. It reported that steps should be taken to provide social security and retirement plans for all nurses, and suggested that hospitals adopt definite personnel policies for all institutional nurses so that their salaries, hours, sick leave and vacations would be comparable to those granted in other fields of endeavor for women with equivalent education and training.

The addition of prepaid nursing care to existing prepaid hospital and medical care plans was recommended to benefit the patient.

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BIBLIOGRAPHY: 1. United States Dispensatory, ed. 24, Philadelphia, J. B. Lippincott Company, 1947, p. 1446. 2. Wiesbader, H., and Filler, W.: Am. J. Obst. & Gynec. **51**:75, 1946. 3. Allen, W. M.: South. M. J. **37**:270, 1944. 4. Lyon, R. A.: Am. J. Obst. & Gynec. **47**:532, 1944. 5. Groper, M. J., and Biskind, G. R.: J. Clin. Endocrinol. **2**:703, 1942. 6. Soule, S. D.: Am. J. Obst. & Gynec. **45**:315, 1943.

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MEMBERS

Dr. L. E. Maker has resigned from the staff of the Topeka State Hospital because of illness and is spending the summer in Fort Collins, Colorado.

* * *

Dr. J. H. A. Peck, St. Francis, announces that Dr. W. W. Gist is now associated with him in practice. Dr. Gist, who served in the Navy medical corps for three years, recently finished a residency in surgery and obstetrics at St. Joseph's Hospital, Denver.

* * *

Dr. J. Richard Nolan, who recently was released from the Army medical corps after 22 months service in the Philippine Islands, has announced the opening of an office for general practice in Kansas City.

* * *

Dr. Glenn Q. Street, Jr., Wichita, was elected a member of the American Psychiatric Association while attending its annual meeting in Washington, D. C., in May.

* * *

Three brothers, Dr. James D. Bowen, Dr. Harry J. Bowen, Jr., and Dr. Clovis W. Bowen, all of Topeka, have announced formation of a partnership for the practice of medicine, surgery and anesthesia.

* * *

Dr. Roy Moser and Dr. Ernest Moser, Holton, announce that their cousin, Dr. Ross Moser, is a new member of the staff of the Holton Hospital. Dr. Ross Moser received his medical education at the University of Kansas, interned at Research Hospital in Kansas City, and served in the Navy during the war.

* * *

Dr. M. E. Schulz, formerly of Wichita, has moved to Russell and is associated in practice there with Dr. F. S. Hawes, Dr. F. N. White and Dr. W. J. Pettijohn.

* * *

Dr. Paul H. Grubb recently opened an office for practice in Galena. He was graduated from the University of Kansas School of Medicine in 1945, served an internship at St. Margaret's Hospital in Kansas City, and then spent three years in the Army medical corps.

* * *

Dr. C. R. Schmidt of the Hertzler Clinic, Halstead, was recently elected to membership in the American Association for the Study of Goiter.

* * *

Dr. Bernice Havley, Centralia, went to New York last month to take a postgraduate course in surgery.

* * *

Dr. H. L. Graber, Nickerson, has been appointed local surgeon for the Missouri Pacific railroad.

* * *

Dr. Howard E. Marchbanks, son of the late Dr. Howard Marchbanks of Pittsburg, was released from the Army several months ago and has joined the staff of the Smith Clinic at Pittsburg. He will limit his practice to obstetrics and gynecology.

* * *

Dr. Frank A. Rieke, who recently completed a two and one-half year residency in surgery at St. Margaret's Hospital, Kansas City, has opened an office in Kansas City.

* * *

Dr. J. D. Bowen, Topeka, was recently reappointed to the state hospital advisory council by Governor Frank Carlson.

Dr. Harle V. Barrett of Independence, who has been serving as Montgomery County Health officer, moved to Topeka August 1 to become assistant to the chief health officer at the city-county health department.

* * *

Dr. Claude C. Tucker, Wichita, prepared a discussion on a paper, "Lymphomas of the Anorectum," by Dr. Emil Granet of New York for presentation at the A.M.A. meeting in Chicago in June.

* * *

Dr. Victor Hildyard and Dr. D. G. Laury, Baldwin, will open an office in Overbrook soon to provide medical service there several days a week.

* * *

Dr. Karl Menninger, Topeka, has resigned as manager of Winter Veterans Administration Hospital, a post he has held since December 1, 1945, and is now senior consulate and chief of the dean's committee at the hospital. Dr. J. F. Casey, who has been serving as chief of professional services, is now manager of the hospital.

* * *

Dr. H. Wallace Lane, formerly of Lawrence, has been named Butler County health officer.

Golden Belt Society Meets

The Golden Belt Medical Society met at the Manhattan Country Club July 1. Dr. Max G. Berry, Kansas City, discussed "Coronary Artery Disease," Dr. David Robinson, also of Kansas City, spoke on "Treatment of Burns," and Dr. C. F. Taylor of Norton presented a paper on tuberculosis. The next meeting of the society will be held in October.

Magazine Salesman Not Physician

Reports have reached the executive office that a young man soliciting magazine subscriptions in Kansas has been representing himself as a medical school graduate who plans to practice in this state upon completion of a year's internship. In one locality in which the only physician plans to retire soon, the salesman implied that he expected to open an office there on the doctor's retirement. The story has been proved false, and any physician who learns of such activity in his community is asked to notify the sheriff of that county.

Society of Anesthesiology Sponsors Meeting

The Kansas State Society of Anesthesiology, with the cooperation of the Saline County Medical Society, will hold a one-day meeting at the Lamer Hotel, Salina, on Thursday, September 9, with a scientific session beginning at 2:00 p.m. A dinner will be served at 6:00 p.m.

The day's program will include two papers by Dr. Albert Faulconer of the Mayo Clinic, Rochester, Minnesota. The first will be "Selection of the Agent and Method," to be followed by "Some Factors Influencing the Administration of General Anesthesia." Dr. Charles A. Baker, of the University of Kansas Medical Center, Kansas City, will discuss "Post-Cyclopropane Hypotension—Report on a Series of 544 Cases," and Dr. Harold Hyndman, Wichita, will speak on "The Blood Bank Program in Kansas." The scientific program will be concluded with a discussion on "Saddle Block Anesthesia" by Dr. Ray Parmley, Wichita.

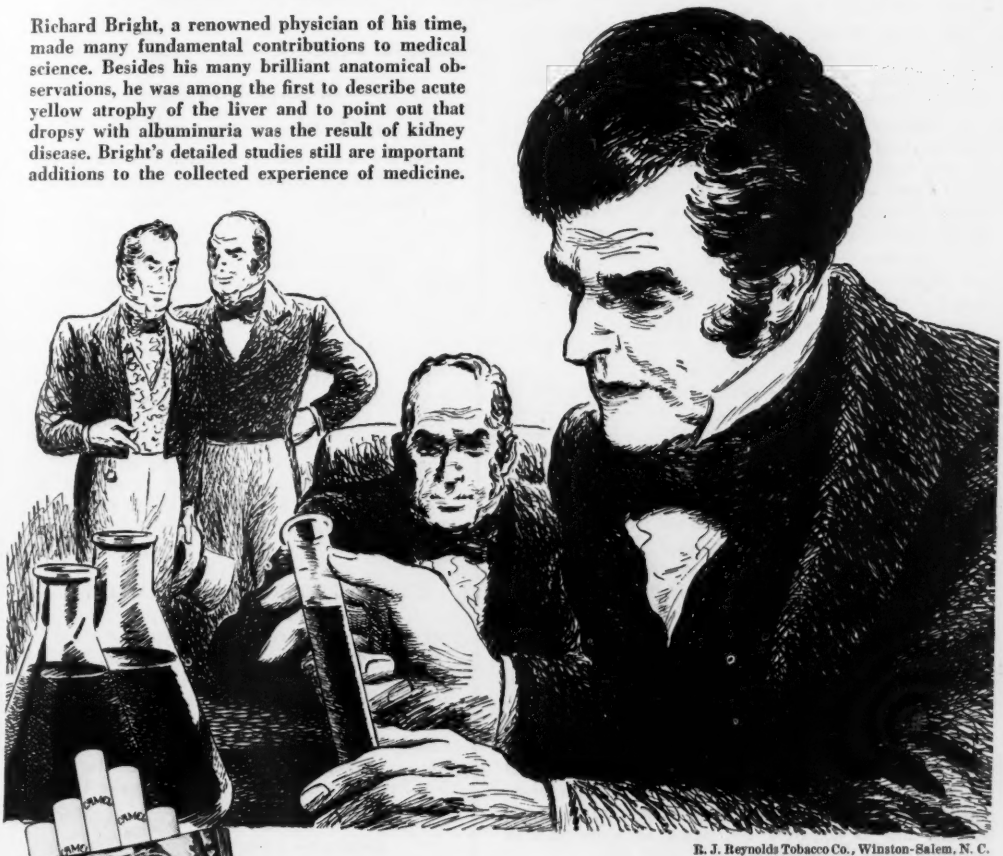
The Society of Anesthesiology will also hold a business meeting and will elect directors. Mr. Clarence G. Munns, Topeka, will discuss economic phases of anesthesia.

Reservations for the dinner should be made with Dr. E. E. Harvey, National Bank of America Building, Salina, Kansas, on or before September 7, 1948.

Experience is the Best Teacher

Richard Bright *(1789-1858) proved it in anatomy*

Richard Bright, a renowned physician of his time, made many fundamental contributions to medical science. Besides his many brilliant anatomical observations, he was among the first to describe acute yellow atrophy of the liver and to point out that dropsy with albuminuria was the result of kidney disease. Bright's detailed studies still are important additions to the collected experience of medicine.



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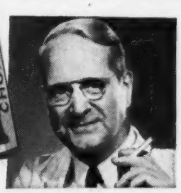

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Three independent research organizations in a nationwide survey asked 113,597 doctors what cigarette they smoked. The brand named most was Camel!

Use of Artificial Appliances

Editor's Note. Physicians who have provided services to handicapped persons under the program of the Kansas Division of Vocational Rehabilitation will be interested in the following report on the use of artificial appliances. The material was prepared for the Journal by Mr. Miles Pulford, supervisor of the division.

The Kansas Division of Vocational Rehabilitation, like most of the rehabilitation agencies of other states, has been concerned with the use clients make of artificial appliances furnished by the division.

In Kansas, facilities have not been available for use in assisting clients in learning how to obtain maximum use of their appliances. Division consultants have tried to assist clients in learning to use the appliances, but this method has not always been satisfactory due to the length of time elapsing between contacts with the clients.

In order that an evaluation might be made of the services of providing artificial appliances, the division conducted a survey of this service to determine whether the clients were, or were not, using their appliances, and whether they were wearing them on the job, or while they were taking on-the-job training.

The survey covered the period from July 1, 1946 to July 1, 1947. During the period, the division assisted 87 clients in securing appliances. Of this number, 62 were men and 25 were women. Prostheses provided were 47 artificial limbs, five dentures, 20 hearing aids, two artificial eyes and 13 pairs of glasses. Results of the survey showed that 82 of these were in use and five were not.

Seventy-four clients were employed, or in training, eight were adjusting to the use of the appliances, and five were unemployed. The total amount of money spent on these 87 individuals for services was $31,106.67. The 74 clients employed were earning monthly salaries totaling $8,564.83, or $102,778.02 per year.

In comparison with the amount spent by the division in furnishing appliances and other services for these clients and the monthly income earned by the clients, it would seem that the sum of $31,106.67 spent by the state of Kansas has been worthwhile, as the service furnished has made it possible for the individuals to become assets rather than liabilities to the state. They are now taxpayers, and, as taxpayers, are taking an active part in building better communities and a better state.

Dr. W. Olin Clark Dies

Word has been received in Kansas of the death of Dr. Willard Olin Clark, 62, of Lewiston, Idaho, on June 1. Dr. Clark is well known here as he was graduated from the Kansas Medical College, Topeka, in 1912 and was the last physician to intern at Christ's Hospital, Topeka. After several years residency at the hospital, he took postgraduate work in Philadelphia, New York, Vienna and Budapest, specializing in surgery. He had practiced in Lewiston for 28 years.

New Officers of A.M.A.

The officers of the American Medical Association for the year 1948-1949 are as follows: president, Dr. R. L. Sensenich, South Bend; president-elect, Dr. Ernest E. Irons, Chicago; vice president, Dr. Roy W. Fouts, Omaha; secretary, Dr. George F. Lull, Chicago; treasurer, Dr. Josiah J. Moore, Chicago; speaker, Dr. Francis F. Borzell, Philadelphia. New trustees elected are Dr. Gunnar Gundersen, LaCrosse, Wis.; Dr. Edward S. Hamilton, Kankakee, Ill., and Dr. Walter B. Martin, Norfolk, Va.

Every visit to the clinic or the doctor's office, every visit by the public health nurse, is health education, for the visit provides the most powerful type of learning, namely, experience. If the experience is not satisfying, there will be a tendency to avoid seeking health and medical care the next time that the individual or a member of his family needs it.—Pub. Health Rep., Nov. 14, 1947.

DEATH NOTICES

GEORGE ALBERT LANDES, M.D.

Dr. G. A. Landes, 67, a member of the Labette County Medical Society, died at Parsons June 24. He had practiced there since 1915, specializing in eye, ear, nose and throat work. Dr. Landes was graduated from Rush Medical College in 1904 and first served with the federal Department of the Interior as a physician and surgeon. During World War I he was a captain in the army medical corps.

* * *

LEWIS SHEPARD FISHER, M.D.

Dr. L. S. Fisher, 65, who had practiced in the Argentine district, Kansas City, for the past 30 years, died at his home there June 26. After his graduation from the University of Kansas School of Medicine in 1907, Dr. Fisher opened an office in Rice County and practiced there until he entered the army medical corps in World War I. In Kansas City he served on the staffs of Bethany and Providence Hospitals.

* * *

LOUIS MONROE TOMLINSON, M.D.

Dr. L. M. Tomlinson, 59, who practiced in Topeka and in the Harveyville and Dover communities, died at Topeka July 1. He was a member of the Wabaunsee County Medical Society. Dr. Tomlinson was graduated from Kansas Medical College, Topeka, in 1913 and opened an office in Harveyville immediately. He returned to Harveyville after serving in World War I, and maintained an office there until his death, although he moved to Topeka in 1945 and practiced there and in Dover also.

* * *

EDWARD LAWRENCE ASBELL, M.D.

Dr. E. L. Asbell, 75, who had practiced in Kansas City more than 40 years, died at his home there July 3. He was an honorary member of the Wyandotte County Medical Society and had once served that society as president. He was graduated from the St. Louis College of Physicians and Surgeons in 1896 and practiced for several years at Humbolt, Illinois, before opening his office in Kansas City. During World War I he served in the army medical corps.

* * *

WILLIAM FRANCIS BOWEN, M.D.

Dr. W. F. Bowen, 75, a past president of the Kansas Medical Society, died at his home at Topeka July 25. A graduate of the Kansas Medical College, Topeka, in 1898, Dr. Bowen began practice in Topeka and was active in medical affairs until his retirement several years ago. He served as chief of staff at Christ's Hospital, Topeka, for 30 years, and at one time was president of the Shawnee County Medical Society. He was a fellow of the American College of Surgeons.

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ABSTRACTS

Sarcoidosis

Sarcoidosis: A Review and an Appraisal. Henry E. Michelson, J.A.M.A., 136:16, 1034 (April 17), 1948.

The author who is director of the Division of Dermatology and Syphilology at The University of Minnesota presented this review before the Dermatology and Syphilology Section of the A.M.A. and emphasized throughout his presentation the protean manifestations and the widespread systemic envolvement. The name sarcoidosis he believes if preferable to sarcoid or Boeck's sarcoid since the latter fails to emphasize the probable systemic envolvement.

The following points were also emphasized: (1) The disease is also known as Besnier-Boeck-Schauman's disease, benign lymphogranulomatosis, epithelioid reticuloendothelial granuloma, noncaseating tuberculosis and other less well known synonyms. (2) The disease is systemic, follows a chronic course, has the characteristics of a benign infection, and in most patients the lesions regress and disappear. (3) The lesions may be demonstrable on skin, mucous membranes, superficial and palpable glands, the eyes, by x-ray studies of the small bones of the extremities and the thorax. Though sternal biopsy, blood studies and the electrocardiogram may be helpful, the only positive diagnosis is that made by histological study of tissue. (4) The tuberculin test is not reliable in the diagnosis of sarcoidosis but Kreim's test holds promise. (5) The disease has occurred in infants and the aged, in both sexes and all races. (6) So called sarcoid-like tuberculosis in the American Negro, the author believes should not be included until more is known about it. (7) The etiology of sarcoidosis is not proved and though tuberculosis has been thought by many to be the etiology several differences are pointed out: tuberculosis untreated progresses but sarcoidosis does as well untreated; tuberculosis not infrequently involves the larynx and upper respiratory tract, but sarcoidosis rarely does; sarcoidosis involves not infrequently the parotid, submaxillary and lachrimal glands and may have a rapid febrile course, whereas such a picture is rare in tuberculosis. (8) Other possible etiologic entities discussed are: leprosy, brucellosis, foreign body reaction. (9) Sarcoidosis often involves the heart, kidneys, spleen, thoracic organs, and the liver and in the latter punch biopsy has been helpful. (10) Sarcoidosis rarely occurs in more than one person in a family and no environmental or contact factor has been observed which further contrasts it with tuberculosis. (11) No prodromal signs or symptoms are dependable. (12) Though Vitamin D 2 deserves further trial it is not nor is any other therapy dependable.

In the discussion that followed the paper, Dr. Fred Weidman of Philadelphia and Dr. Arthur Curtis of Ann Arbor made pertinent comments. The former said he preferred the term sarcoid and said he had seen sarcoid reaction in leishmaniasis.—*P.W.M.*

* * *

Cervical Intervertebral Disks

Rupture of the Cervical Intervertebral Disks. Glen Spurling, Jnl. Inter. Coll. Surg., X, 502-509 (Sept.-Oct.), 1947.

In the author's experience the incidence of rupture of an intervertebral disk at cervical levels is about one to 12 as compared with those in the lumbar region. Most cervical disk ruptures occur in patients over 40 years of age, usually at the fifth or sixth interspace (in the ratio of one to two). The clinical syndrome in each instance is quite constant and these are described as follows: fifth cervical disk—pain and paresthesias radiating from neck to shoulder and to the posterior aspect of the thumb; this is aggravated by tilting the head to the painful side. Weakness or absence of the tendon reflex of the biceps muscle. Sixth cervical disk—pain and paresthesias as above except that radiation is to the index and middle fingers and may include the ring finger and tip of the thumb. Weakness or absence of the triceps muscle reflex is found. Plain x-rays in the lateral view usually show narrowing of the intervertebral space, even with the neck hyperextended. Contrast myelography may be necessary. Conservative treatment consists of bedrest with five to 10 pounds halter traction applied continuously. If relief is not obtained in four days, surgery may be necessary. Operative technic is discussed.—*T.P.B.*

* * *

Sympathetic Ophthalmia

The Problem of Sympathetic Ophthalmia. Bernard Samuels, Montgomery Lecture Delivered before Irish Ophthalmological Society at Trinity College, Dublin, May 12, 1947. Amer. Jnl. Oph. (April), 1948.

The historical review of the disease is relatively brief and to the point. Hippocrates mentions the disease in one brief sentence and then it seemingly was forgotten for centuries, receiving scant notice until 1835 when William MacKenzie brought the importance of it to medicine.

The disease is always bilateral; breaking out first in the exciting eye (the primarily injured eye) and afterward in the uninjured eye—called the sympathizing eye. That a disease in one organ should excite an identical disease in a symmetrical organ is a most extraordinary phenomenon in human pathology.

The disease is characterized anatomically by the appearance in the pigmented and highly vascular uvea of an infiltration composed of three elements: lymphocytes, epithelioid cells, and giant cells, this being known as the specific infiltration of sympathetic ophthalmia.

He discusses the similarity and differences between sympathophthalmia and tuberculosis and finally concludes that they are not part of the same process.

In his discussion of accidental injuries of the globe he points out that nearly all the penetrations are in the antero-posterior direction. The region of the ciliary body is the dangerous zone and the more extensive the uveal prolapse, just so greater is the hazard.

In the discussion of surgical openings, he states that "there is no standard operation in ocular surgery that has not had marked against it a case of sympathetic ophthalmia or infection." Cataract extraction heads the list, followed next by operations for glaucoma, the two major sight-saving procedures.

In discussing the theories of pathogenesis he properly discards the transmission by way of the sheaths and chiasma and the optic nerves. The allergic theory brought out by Elschnig in Prague in 1909 and further developed by Woods in Baltimore is presented. He seems to lean toward the virus theory.

The virus has the perforating wound as its point of entrance. Here it lodges in the uvea and produces an irritation which results in the specific infiltration of sympathetic ophthalmia. It spreads from this point to other parts of the uvea of the same eye and thence thru the blood stream to the uvea of the other eye. He thinks the virus has a selective affinity for uveal tissue. The virus may already be in the blood and only after the uvea is traumatized does it lodge and multiply there and take on its selective affinity.

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He brings out the point that an ophthalmic surgeon often delays too long the enucleation of an eye that has not healed properly. In some of our larger hospitals a case or two of sympathetic ophthalmia may occur and then be followed by an interval of freedom.

In the sympathizing eye he calls attention to slight disturbance of vision (very mild blurring); photophobia; tearing; and even failing accommodation. He emphasizes the importance of pupillary adhesions and deposits on the posterior surface of the cornea.

The time to enucleate the exciting eye is:

1. When the fellow eye is irritable even though it be apparently normal;

2. At the discovery of deposits on the posterior surface of the cornea of the uninjured eye;

3. In all cases where the wound is retracted, eyeball is soft and tender and vision is failing.

Sympathetic ophthalmia has been known to set in within 48 hours after the injury, but it may not happen for many years.

When not to enucleate:

1. When the wound heals properly, tension is good and some sight remains and the fellow eye shows no irritation.

2. When the injured eye has some vision after the fellow eye becomes markedly inflamed—the primarily injured eye MAY be the one to retain any sight at all.

3. When both eyes are violently inflamed, it will serve no purpose to enucleate either eye.

4. Do not do an enucleation in the presence of panophthalmitis as patients have died from meningitis following enucleation at such a time.

Medicinal treatment seems of no avail and he mentions the trials with salicylates, mercury, salvarsan, tuberculin, sulfa drugs and penicillin.—*W.B.G.*

ANNOUNCEMENTS

September 7-11—26th Annual Scientific and Clinical Session, American Congress of Physical Medicine, Hotel Statler, Washington, D. C.

September 20-23—15th Anniversary Convention, American Hospital Association, Hotel Traymore, Atlantic City, New Jersey.

Sept. 20-23—Postgraduate Course in Metabolic Disorders, Dallas Southern Clinical Society, 433 Medical Arts Building, Dallas 1, Texas.

Sept. 23-25—16th Annual Meeting, Central Association of Obstetricians and Gynecologists, Shirley-Savoy Hotel, Denver, Colorado. For information write Dr. John I. Brewer, secretary, 24 West Ohio Street, Chicago 10, Illinois.

September 29-October 1—13th Annual Meeting, Mississippi Valley Medical Society, Springfield, Illinois.

October 4-7—26th Annual Fall Clinical Conference, Kansas City Southwest Clinical Society, Kansas City, Missouri.

Oct. 18-22—34th Clinical Congress, American College of Surgeons, Biltmore Hotel, Los Angeles, California.

Nov. 30-Dec. 3—Midwinter Meeting, A.M.A. House of Delegates St. Louis, Missouri.

March 28-April 1—30th Annual Session, American College of Physicians, New York, New York.

MAY 9-12—90th ANNUAL SESSION, KANSAS MEDICAL SOCIETY, TOPEKA, KANSAS.

June 6-10—Annual Meeting American Medical Association, Atlantic City, New Jersey.

Mississippi Valley Society to Meet

The 13th annual meeting of the Mississippi Valley Medical Society will be held at the Abraham Lincoln Hotel, Springfield, Illinois, September 29-October 1, under the prseidency of Dr. Willard O. Thompson, professor of medicine at the University of Illinois College of Medicine. Twenty-five clinical teachers will conduct the postgraduate assembly, and there will be 40 scientific and technical exhibits, round table luncheons, and clinicopathologic conferences. No registration fee will be charged, and all physicians are invited to attend.

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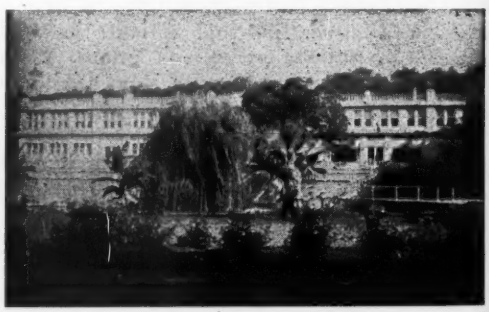

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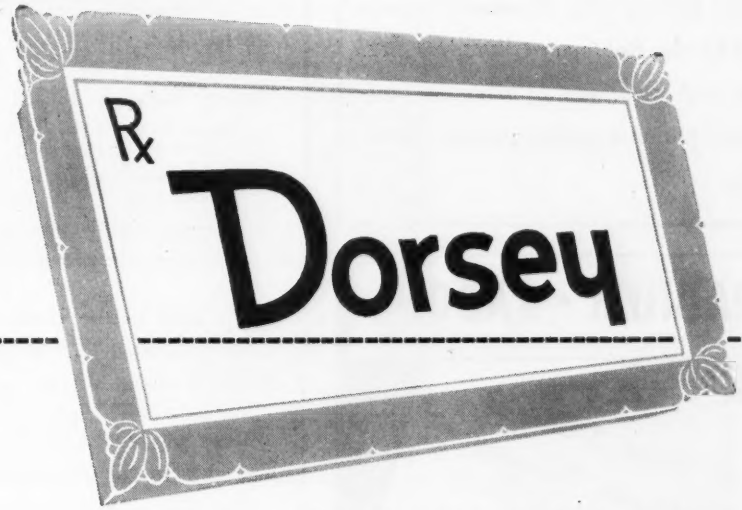

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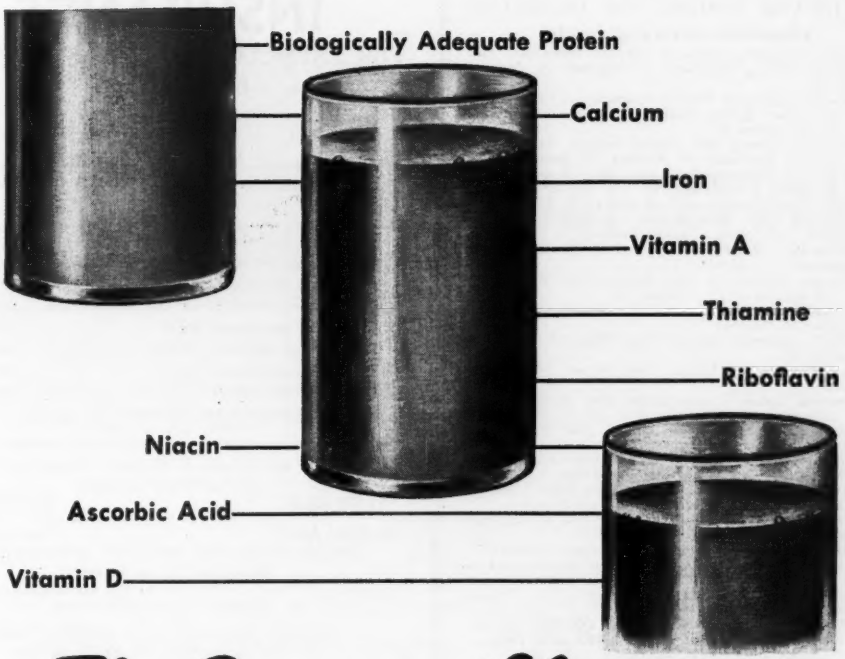

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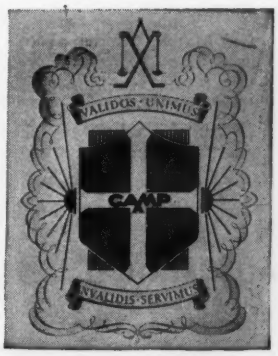

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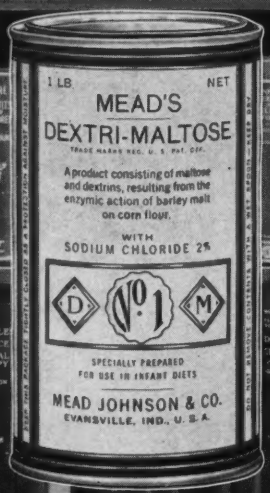
BACKGROUND

The use of cow's milk, water and carbohydrate mixtures represents the one system of

infant feeding that consistently, for over three decades, has received universal pediatric



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